Clinical Lecture

ON THE

TREATMENT OF "PERSISTENT" INFLAMMATION

BY THE

LOCAL APPLICATION OF SOLUTIONS OF THE OLEATES OF MERCURY AND MORPHIA.

Delivered at University College Hospital, March 16th, 1872.

By JOHN MARSHALL, F.R.S.,

PROFESSOR OF SURGERY IN UNIVERSITY COLLEGE, LONDON.

GENTLEMEN,—I wish to speak to you to-day about certain new combinations of two very old remedies which have been much used in surgery—combinations presenting many advantages over the forms of those remedies ordinarily in use, and possessing a value of which I have now had ample experience, having frequently tested their efficacy during the last three years. They consist essentially of solutions of oxide of mercury in oleic acid—being, in reality, the oleate of mercury dissolved in oleic acid; but to these solutions is added a certain quantity of morphia, which, in its uncombined state, is readily soluble in, and doubtless unites with, the oleic acid. I have employed these mixed oleates of mercury and morphia chiefly in the treatment of what I would term prolonged or "persistent" inflammation, which is at once obstinate and difficult to control.

Inflammation, as you know, is a local disease, involving the occurrence of certain changes in the part affected. It is characterised by a state of irritation or morbid excitement of the sensory nerves, by a diminished functional activity of the vasi-motor nerves and of the walls of the bloodvessels, by the supervention of exudation and the emigration of white blood-corpuscles, and sometimes by the formation of new organised products, derived by processes of evolution from the pre-existing anatomical elements. When these several conditions occur in a healthy person, when their causes are transitory, and the surrounding circumstances favourable, the nervous irritation and vascular disturbance subside, the products of exudation, emigration, and new formation are absorbed, and the local disease is straightway cured.

But, not unfrequently, owing to various causes, the conditions of inflammation, whether they extend or remain limited in area, become prolonged or "persistent" in a given locality. I prefer the term "persistent," to distinguish this state, to either of the more specialised terms "subacute" or "chronic"; for such state may be, and often is, more acute than subacute in its type, and it may, and often does, cause more constitutional disturbance, though less consequential degeneration of the tissues involved, than is produced by a truly chronic inflammation.

This prolongation or "persistence" of local inflammation may be due to various causes, local or general. Thus the parts affected may not be kept sufficiently at rest, as when a joint is exercised too soon after injury or inflammation. Or the interruption to the cure may be due to the continued performance of some natural function—as, for example, in the case of the tonsils, the glottis, certain orifices of the body, the mammary gland, or uterus,—the condition induced, in such cases, being not so much chronic as "persistent" and severe. So, also, if the general health be disordered—if a gouty, rheumatic, or syphilitic, an anæmic or plethoric condition should exist,—a local inflammation may not disappear, but may be prolonged or become "persistent." Again, supposing this condition to be once established, the products of the inflammatory process, either by their presence or as a consequence of the chemical changes which they themselves undergo, may excite or exhaust the functional activity of the neighbouring nerves, bloodvessels, and other tissues, and may thus induce further irritation, leading, if not to the extension, at least to the prolongation of the inflammatory process. Inflammation of this obstinate type may, of course, terminate in suppuration, ulceration, or gangrene; or it may, by some interference with the nutrition of the affected tissues, impair or destroy the elasticity or strength of parts which serve mechanical uses in the body, or deeply influence their special vital functions.

Now, in the treatment of all inflammation, three chief ends must be kept in view—namely, the relief of the local nervous irritation, the stimulation of the vasi-motor nerves and the bloodvessels, and the promotion of the absorption of the inflammatory educts and products. The mode by which this absorptive process is actually accomplished is so far normal that these inflammatory products and educts undergo a series of changes—namely, softening, degeneration, and solution—quite similar to those through which certain healthy tissues pass when they are no longer needed in the economy; as, for instance, the tissues of the uterus and mammary gland after parturition and lactation are completed. In the quasi-normal as in the normal process, the veins and lymphatics are the agents of absorption. Finally, when the morbid constituents or products are removed, the nervous irritation and the vascular disturbance are allayed, and the part regains its ordinary or healthy condition. In many cases, time, rest from mechanical use or functional activity, and freedom from disturbing influences, are sufficient to ensure this natural process of recovery. In a certain number of instances it will happen that a purgative, a diaphoretic, a stimulant, a tonic, or a sedative, will indirectly promote absorption; and thus salines, alcohol, quinine, iron, and morphia, may really act as absorbent remedies, and so especially will food and pure air.

But in the management of the prolonged or persistent inflammation above referred to, further local measures are often indispensable; and, for the purposes of practical illustration, let us suppose we have to deal with persistent inflammation of a *joint*. Here, as of primary importance in the local treatment, must be mentioned immobility and rest, as secured by means of proper splints or other apparatus, accompanied by the use of a sling for the upper limb, and by the maintenance of the recumbent posture for the lower limb. Next may be considered the application of uniform and judicious pressure, by means of cotton-wool confined by suitable bandages. Heat and cold have also their peculiar advantages in particular cases. Lastly, certain medicated applications have frequently to be resorted to. Whether these are employed in the form of lotions, fomentations, liniments, ointments, or plasters, they usually contain one or more of the following substances as their active ingredients—viz., alcohol, ammonia, camphor, turpentine, cantharides, iodine, or mercury, with or without chloroform, opium, morphia, or belladonna. Each of these most efficacious remedies is, no doubt, adapted to particular stages of persistent articular inflammation; but every surgeon meets with numerous instances of such inflamed joints which, in spite of care and good treatment, continue obstinately uncured for weeks or months. With some, blisters, and with others, iodine, is the favourite remedy in such cases. Scott's ointment and the mercurial liniment are likewise often employed with great advantage, in both of which applications mercury is the most active ingredient. But mercurial ointment, the basis of these preparations, is merely a mechanical mixture of minute globules of mercury, or of solid particles of the black oxide, with some unctuous substance; and I have long thought that, if we could employ a *solution of mercury in some oleaginous or unctuous medium*, we should obtain more immediate, rapid, and satisfactory results from the well-known therapeutical powers of this ancient remedy. The other mercurial ointments now in use, made with the nitric oxide, the subchloride, the ammonio-chloride, or the red iodide, are also essentially mechanical mixtures, and all, as well as the nitrate ointment, are too irritating to be used as topical absorbents. In seeking for my object I first dissolved some of the perchloride of mercury in a small quantity of ether, and added to it about four times the amount of oleic acid; but I found that this combination freely used on the skin produced much irritation, unless it was employed in too dilute a form to be of service as an absorbent. In Gmelin's chemistry there is a short account of certain metallic oleates formed by double decomposition; but with this as a guide, I failed to obtain any satisfactory oleate of mercury. My friend, Mr. Frank Clowes, to whom I then referred the chemical question, soon discovered that, although the ordinary sublimed scales of red oxide of mercury were with difficulty dissolved in oleic acid, the oxide,

precipitated by caustic potash or soda from a solution of the metal in nitric acid (which is a yellow impalpable powder) is, when recently made and well dried, readily soluble in oleic acid, especially when aided by a temperature of about 300° Fahr. At my request Messrs. Hopkin and Williams have since studied the subject pharmaceutically, and have succeeded in preparing oleate of mercury, and certain solutions of that salt in oleic acid. The strength of the preparations made by them is indicated by the percentage of the oxide of mercury which they contain. The 5 per cent. solution is a perfectly clear pale-yellow liquid, resembling olive oil, but thinner; the 10 per cent. solution is also fluid and perfectly clear, but as dark as linseed oil; whilst the 20 per cent. preparation is an opaque yellowish unctuous substance, closely resembling in appearance resin ointment, melting very readily at the temperature of the body, and forming a kind of transparent, viscid, colourless varnish when applied to the skin. The chief care to be observed in the manufacture of these solutions is not to hurry the process, and not to employ a high temperature, or the mercury will be immediately reduced.

Unlike the mercurial ointment so long in vogue, which is a crude, gross, unscientific mixture, very dirty and very wasteful, because so small a proportion of its mechanically admixed mercury is but slowly absorbed, these solutions of oleate of mercury are cleanly and economical in use; and as the diffusibility or penetrating power of oleic acid is much greater than that of ordinary oils or fats, and as each one-thousandth part of even a minim of these new preparations contains its proper modicum of mercury, they are absorbed by the skin with remarkable facility and manifest their remedial effects with great promptitude. They should not be rubbed in like ordinary liniments or embrocations, but should be *merely applied with a brush, or be spread lightly over the part with one finger;* otherwise they may cause cutaneous irritation, or even produce a few pustules on the skin, especially in certain persons. This result may, however, be obviated by the addition of a small quantity of olive oil, or purified lard, according as an oleaginous or an unctuous preparation is required. Any of these forms may be scented by the addition of essential oils.

In employing these mercurial solutions for combating persistent inflammation of joints, I soon found that the addition of morphia was of very great advantage. For this purpose the simple alkaloid must be used, as neither the hydrochlorate, the acetate, nor the meconate is soluble in oleic acid. For every drachm of the solution of oleate of mercury in oleic acid one grain of morphia may be added. Being, as well as the mercury, completely dissolved, it quite as rapidly penetrates the skin, comes quickly into contact with the extremities of the nerves, and thus, even within a few minutes, acts upon them at their most sensitive points, and speedily produces a soothing effect.

The oleates of mercury and morphia, thus united in one preparation, represent, as it were, a liniment, ointment, or plaster of mercury and opium; but they are far more elegant, economical, and efficacious. As a rule, according to the size of the part affected, from ten to thirty drops are sufficient for one application. This should be repeated twice daily for four or five days, then at night only for four or five other days, and afterwards every other day, until a cure is obtained. The morphia immediately begins to relieve pain, allays the nervous irritation and consequent vascular turgescence, and thus arrests the progress or "persistence" of the inflammatory process; whilst the mercury probably promotes the death and degeneration of the morbid products, and so facilitates their subsequent removal by absorption. Unless used in excessive quantity, the oleate of mercury does not salivate, or produce any marked constitutional disorder.

As some of you will remember, I recently tested, in the hospital, the value of these combined oleates in the treatment of a case of "persistent" inflammation of the knee-joint. This affection, I need hardly say, is often difficult to cure, on account of the large size of the articulating surfaces, ligaments, and synovial capsule, and also on account of the great weight supported at the joint, and the frequent disturbance of the parts in the unavoidable movements of the limb and body. Frequently, indeed, this disease leads to irreparable injury to the knee. In the case in question, occurring in a man aged forty-four, the disease had already lasted upwards of eighteen months. From effusion into and about the joint the knee was greatly swollen and disfigured; there was not only synovitis, but, in addition, inflammation and thickening of the fibrous capsule and the ligaments of the joint. He complained of great and constant pain, of a creaking feeling or noise when the knee was moved, and of occasional starting pains at night, probably indicative of threatened or actual softening of cartilage. The skin over the knee was œdematous, and deeply stained with iodine, the remedy which had chiefly been relied upon before his admission under my care. After this stain had been removed, from twenty to thirty drops of the solution of oleate of mercury and morphia (5 per cent. of the former with one grain of the latter to the drachm) were applied to the knee night and morning for about ten days, and then at longer intervals. A piece of linen was kept around the joint; over this was put a smooth, thick layer of cotton-wool, and then the limb was rather firmly bandaged from the foot to just above the knee. During this treatment, the patient, who was of course confined to his bed, rapidly improved in all respects; and at the expiration of four weeks he left the hospital, able to walk by the aid of lateral leather splints, and very far advanced towards a cure. From the first day of their application the effect of the remedies was decided and prompt. I could adduce many other examples equally satisfactory. I select the two following:—

1. A gentleman, aged thirty-one, suffered, about eighteen years ago, for some weeks from an attack of fever, followed by consecutive abscesses in the left hip-joint, which led to stiffness, shortening, and wasting of the corresponding limb. On his recovery, the right leg was necessarily subject to over-use, which, together with occasional blows received at foot-ball and otherwise, brought about repeated attacks of capsule-synovitis in the right knee. These at length resulted in chronic thickening of the joint. During the last three or four years, owing chiefly, it is said, to the increasing weight of the body, renewed attacks of inflammation more or less acute led to a state of "persistent" inflammatory disease of the joint, which became much enlarged, deformed, somewhat flexed, and almost immovable. There was pain on the slightest motion, especially on twisting the leg, and such extreme tenderness that the patient shrank from even an attempt at examination of the knee. There was scarcely any power in the limb; and there were nocturnal startings on falling asleep. Finally, the joint at one part seemed on the point of suppurating, as indicated by increased local heat, redness, and œdema, and by the occurrence of slight shiverings. In consultation with Dr. Sheldon, I ordered absolute rest in bed, the use of two long well-fitted leather splints, and the employment of the combined oleates of mercury and morphia, as above indicated. The first application afforded manifest relief to the local pain. This and the exaggerated tenderness soon subsided, absorption was established, and the size of the joint became so reduced that the splints speedily required renewal; and in four weeks there was complete freedom from pain in and about the knee, and the patient was soon able to walk on crutches with comparative ease. Thus in a month, a joint, already very seriously implicated and threatened with suppuration, was practically saved. I can confidently say that I know of no other treatment which would have afforded such satisfactory and speedy relief. I doubt whether Scott's plan would have succeeded in controlling the disease present in this knee; certainly it would not have done so with such promptitude.

2. The case now to be related was equally demonstrative of the efficacy of these combined oleates. A young lady at school in London, having had a series of inflammatory attacks affecting the left wrist, each of which had been subdued by appropriate treatment, came to me with great exaggeration of her worst previous symptoms, owing to a fall she had met with a month or so before her visit. Her wrist was hot, painful, and much swollen; there was distinct fluctuation on the back of the joint, and the hand was slightly displaced forwards at the radio-carpal articulation; but the joint was so painful that no very minute examination could be attempted. At the expiration of a week after the commencement of the use of the combined oleates, a marked improvement was manifest. After four weeks, the disease was sufficiently abated to admit of the application of a close-fitting leather splint; but the ultimate result must be uncertain, as I detected a very distinct grating

sensation in the joint, and more or less fluctuation still remained opposite to the lower end of the ulna.

I will now advert as briefly as possible to the use of these same preparations of mercury and morphia in the local treatment of "persistent" inflammation affecting other parts or organs of the body. Indeed, their applicability and utility appear to me to be almost coextensive with the occurrence of such inflammations themselves, provided only that the seat of the disease be in, or sufficiently near to, the skin.

I may first mention that not only in persistent articular inflammation, but also in simple synovitis, these remedies rapidly relieve the tenderness and pain, and promote the absorption of the fluid effused into a joint. They are also of decided benefit in the rheumatic, the arthritic, and the mixed forms of joint disease; but in these they do not, of course, supersede the necessity for general treatment. In inflammation of the mammary gland occurring during or after lactation, or altogether independently of that secreting process, their efficacy is unequivocal; for I have seen, not only the induration left after previous abscesses speedily disappear under their use, but a tendency to recurrent suppuration in the site of old abscesses, and the threatened formation of new ones, entirely controlled and arrested. I have also seen a threatened abscess in the perineum from inflammation of one of Cowper's glands, and likewise the troublesome indurations left after ordinary perineal abscess, rapidly disappear on the use of these preparations. In obstinate and painful tonsillitis, in epididymitis, in periostitis, and in inflammation with imminent or actual suppuration in or around lymphatic glands, I have similarly employed them with decided advantage. In hydrocele they have not appeared to be useful. I have used equal parts of the 20 per cent. ointment and purified lard applied outside the eyelid, with success, in hordeolum and in palpebral conjunctivitis.

In many cutaneous affections the oleate of mercury solutions, without morphia, form elegant and powerful remedies. It was in a case of obstinate sycosis menti that I first used, and with excellent results, an ethereal solution of the perchloride of mercury mixed with oleic acid; but I now much prefer, as equally efficacious and far less irritating, the five per cent. solution of oleate of mercury in oleic acid, with the addition of an eighth part of ether. This, when applied to the skin with a camel-hair pencil, is a most diffluent and penetrating remedy. It enters the hair-follicles and the sebaceous glands, penetrates the hairs themselves, and carries everywhere with it its powerful metallic constituent. Besides sycosis, it will cure chloasma and the various forms of tinea; it is useful in porrigo and in pruritus ani et pudendi; but I have not found it serviceable in non-specific psoriasis or in eczema. The solution of oleate of mercury destroys pediculi immediately; and, owing to its singular power of permeation, simultaneously kills the ova—a result not always certain when ointments containing undissolved mercury are used.

Again, in many of those syphilitic affections for the cure of which mercury is applicable, the oleate-of-mercury preparations offer some advantages. Thus, in congenital syphilis, a piece of the 20 per cent. ointment, about the size of a pea or bean, placed in the child's axillæ, night and morning for five or six days, rapidly and easily, and without any sign of uncleanliness, produces constitutional effects. Even in the adult this mode of introducing mercury into the system, either for the cure of syphilis or other disease, may often be preferable to, and less troublesome than, the bath, and it certainly gets rid of the objections to the ordinary mode of inunction. As a topical remedy for certain local manifestations of syphilis, such as the non-ulcerated forms of syphiloderma, especially when these disfigure the head, face, neck, or hands, the 10 per cent. solution is a most valuable adjunct to other treatment, the spots rapidly disappearing under its use. This or the 20 per cent. preparation, diluted with equal parts of purified lard, may also be applied to non-ulcerated syphilitic indurations and condylomata, but it gives pain if applied to surfaces much excoriated or ulcerated, to moist warts, or to mucous membranes. In syphilitic iritis, and also in non-specific forms of that disease, this diluted oleate ointment smeared over, not within, the eyelids, evidently promotes the absorption of the effused lymph. Lastly, in some of the remoter kinds of syphilitic affections, which iodide of potassium will usually cure, such as very hard nodes and certain forms of syphilitic testicle, the external application of the oleate of mercury is very valuable. I have seen a case of enlarged testicle and epididymis, the syphilitic origin of which had not been suspected, and for which no mercurial course had been prescribed, but which during a period of six years had been, from time to time, relieved by enormous doses of iodide of potassium, speedily and decidedly benefited by the inunction of the 20 per cent. mercurial oleate.

In reference to other uses of the combined oleates of mercury and morphia, I may remark that I cannot doubt their value in the treatment of "persistent" inflammation of certain internal parts and organs—as, for example, of obstinate pleurisy, pneumonia, pericarditis, and endocarditis; for they would here also allay pain and nervous irritation, would thus contribute towards the arrest of progressive disease, and would likewise promote the process of absorption. Moreover, I may state that a solution of morphia in oleic acid (one or two grains to the drachm), without mercury, is an excellent topical remedy in neuralgia, and in that exquisitely painful affection, herpes zoster, care being taken not to produce cutaneous irritation by friction. I have also used, endermically, with advantage, a solution of atropia in oleic acid, and have had prepared for me the oleates of zinc and copper. Each of these preparations will probably come to have its uses, to which, however, I have now only time thus generally to refer. Oleic acid is likewise a ready solvent of cantharidin and croton oil. It is itself aperient, and permeates fæces more readily than olive oil. Indeed, I fully anticipate that this acid, as well as its compounds with mercury and with morphia, besides other preparations made by its aid, will eventually be admitted into the Pharmacopœia. An ointment of the oleate of mercury would almost supersede the old-fashioned blue ointment, whilst the solutions of the oleates might replace the liniment of mercury. The remaining mercurial ointments of the Pharmacopœia, of which the nitrate may contain a little oleate or some allied salt, will, however, still have their special uses.

Lecture

ON THE

SANCTIONS WITH WHICH DRUGS ARE ADMINISTERED.

Introductory to the Course on Materia Medica delivered at the Westminster Hospital School.

BY OCTAVIUS STURGES, M.D.,

LECTURER ON MATERIA MEDICA AND ASSISTANT-PHYSICIAN.

GENTLEMEN,—In attending these lectures on Materia Medica you may be disposed to ask how far their object would be obtained if you were left to yourselves to acquire the same knowledge in your own way. In other subjects lectures take the form of demonstration, and the student can see done in the lecture-room what he only reads about at home; but here there is little place for experiments or demonstration, so that unless the teacher has something to say besides what is said in the books, or the mode of oral teaching has something in itself to recommend it, it seems difficult, except on the ground of custom and uniformity, to justify, in the case of materia medica, a compulsory attendance on formal lectures. Such a reflection, you may rely upon it, occurs to the mind of the teacher at least as much as to the pupil. The arrangement which brings us together three times a week is not of our making; and while we have no option but to obey it, we may freely discuss its propriety and the mode in which it can be best carried out.

Ever since we have taken larger views of the function of the physician than to limit it to the mere giving of drugs, lecturers upon this subject have been in the habit of occupying their pupils with the consideration, not of the materia medica alone, but of all those agencies alike which can be made serviceable either for the prevention or cure of disease. Thus, while the subject of therapeutics is discussed

in its largest sense, drugs are considered only in the second place; for an account of their preparations and doses and effects the hearer is referred to the text-books, with the caution, however, that these often err by being too absolute in their assertions, and that there is hardly a statement of theirs which ought not to be accompanied by large qualification.

It is very right, no doubt, that drugs should occupy this subordinate position in the teaching of medicine, nor can we too strongly insist upon their being kept in their proper place. Nevertheless, so long as these lectures retain their name, I cannot but think that their chief business should be with the materials of the British Pharmacopœia as by law established, and not with questions of general treatment, which belong to another branch of the subject, and can only be profitably discussed at a later period. It seems to be forgotten that materia medica lectures are attended by students in their first year—at a time, that is, when no adequate conception of disease has been formed, when indeed nothing is known of disease except some of the names it goes by. To discuss with the student at this early period various methods of drug-treatment has its effect, indeed; and it is an effect much to be deplored. It encourages the belief that an acquaintance with all the articles of the materia medica and with certain approved modes of prescribing, implies, as well, the ability to treat disease. There is probably no period of life when treatment is so active or so ready as at the end of the first summer session, when the preparations and doses are fresh in the memory, along with a lively faith in their asserted virtues. And so it happens often, when, a few months later, the subject of medicine is brought before the student for the first time, that he listens with impatience to principles, from a belief that he has anticipated their practical result. Not only is he the worse for the possession of much false knowledge, but the lecturer on medicine may properly complain that his material has been spoilt for him. It may be that these lectures might usefully be deferred until the second year, when the subject could be treated more fully and freed from the dangers I have alluded to. That is not a question for us. Taking the matter as it stands, we have to consider how such teaching as is prescribed can be adjusted to the wants and present capacity of the learners, and how we can best contrive to treat of remedies with as little reference as possible to the diseases which they cure. The solution seems to be this:—Having learnt from physiology something of what health is, you come to inquire now as to the manner in which certain agents known as medicines act upon health. In other words, you are to study now the physiological action of drugs without reference to their therapeutical action. You may learn also, if you choose (as well now as at another time), certain particulars as to the preparation of the drugs themselves and the sources whence they are derived. Obviously the scope of these lectures can go no further than this, and obviously the application even of this much must come hereafter. Presently, in the lectures upon Practical Medicine, you will have to consider the nature of those altered conditions of the body which constitute disease; and the question will then first arise, "How are these medicinal agents, whose general deportment is already known to me, to be employed under these new circumstances?"

You are invited, then, to observe certain phenomena exhibited by healthy organisms under the influence of drugs, but cautioned at the same time against seeking at present to apply such observations to any useful purpose. It is only reasonable, under such circumstances, that you should desire to know beforehand, upon a general view of the matter, something of the practical issue of inquiries of this sort. How far, you may fairly ask, as a matter of fact and history, have these experiments with drugs actually helped forward the curative treatment of disease? I might seek an answer to this question by a bare enumeration of recent experiments, and attempt to estimate their exact value either in supplying us with new drugs or in clearing our views as to the employment of old ones. Such a discussion would carry us at once beyond the limits I have just laid down, and be a mere attempt on my part to fasten upon you my own preconceived views. We may safely go so far as to assume that, taking the question upon a simple comparison of labour with results, there would be a wide difference of opinion as to the practical issue of such experiments. I express only my personal belief in the matter in supposing that it would be admitted by the majority that less had been learnt by acting upon the apparent teaching of physiology than was at first expected, and that there would be found lurking in many minds a feeling akin to disappointment in contrasting the present state of physiological science with the present state of medical treatment. However this may be, what has been done already is no measure of what it may be possible to do hereafter with the same materials. The question which the student would have answered is no less than this, How far by experimenting upon healthy creatures, men and brutes, am I furnished with necessary information applicable and sufficient for the treatment of disease?

It might seem at first sight that a knowledge of the actions of drugs upon the healthy body would enable us, apart from other experience, to determine how these could best be employed in those deviations from health which constitute disease. It soon appears, however (with no more than an outside view of the matter), that disease is not to be regarded simply as a disturbance of the ordinary functions of the body; it introduces besides new elements altogether. It is true, no doubt, that disease is evidenced to us by certain changes in secretion and temperature and the like, and that these may suggest to the mere experimentalist, who knows no more, rational modes of treatment. Yet such changes, however definite and uniform, are nevertheless subordinate in every case to certain special phenomena proper to the disease, and quite unlike anything to be met with in the state of health. Thus, for example, the observation of the action of alkaline salts upon the healthy urine might furnish us with a rational remedy for certain altered conditions of that fluid; but by no such method of inference, by nothing short of the fact itself, could we have told that quinia would cure the ague, or colchicum arrest a fit of the gout. There is nothing in the condition of health analogous to the special phenomena of these diseases; no physiological or chemical action, therefore, on the part of these drugs could ever point them out beforehand as appropriate remedies under altogether new circumstances.

Are we, indeed, justified in assuming that the drugs we select on the ground of their physiological or chemical properties—whether alkali, or steel, or opium—are ever directly curative in any manner we can understand or approach? It would be difficult to devise any definition, however general, of the class of diseases to which such remedies refer which would not by its terms imply that their source and origin must be wholly beyond the reach of such methods. There is something present which causes the system to work amiss, call it a *materies morbi* or what you will; we see the effects, but we are wholly ignorant of the cause. It is only a part, a very small part, of the general perversion that the temperature is raised, or the urine acid, or the bowels shut up, true though it be that such phenomena taken together make up all that we can know of the disease itself. We may judge beforehand, from our observations upon health, as to which particular symptom out of any of those groups of symptoms to which specific names are given, it will be possible to overcome by the giving of drugs. Granted that the urine may be rendered less acid, the skin less hot, the bowels more active; yet, if it should so turn out that in meeting any one of these outward and visible signs of disease, or even the whole of them, we had in fact met the disease itself and cured it—that, in neutralising a symptom, we had arrested as well the very source and fount of all the symptoms, the action of the drug in that respect, however rational its employment to fulfil its first purpose, would be as purely empirical as anything in medicine. Go a step further. Take the case where a number of separate symptoms are referred to a specified cause residing in the blood, and this not a vague *materies morbi*, but a definite defect in the constitution of the fluid—the absence, say, of certain red corpuscles. Suppose even that considerations of the laboratory had led to the conclusion that, under such circumstances, the salts of iron should be presented to the blood. The success of such a remedy would be in the highest degree gratifying as seeming to illustrate the application of principles to practice. Yet, on a further trial of the matter, not only would it appear that this action of the iron in anæmia was only a very small part of its whole action, but even in the cases

where the drug acted most conspicuously in improving the colour of the blood the fact would remain quite unexplained that when the remedy was withdrawn the cure remained. Granting that the supply of the medicine would account rationally for the subsidence of the anæmia, it would never be suspected that the temporary supply should work a permanent effect, and alter, not merely the blood to which it was introduced, but the very habit which presides over sanguification.

I know that when the event so turns out there are forms of expression enough and to spare in which to clothe it: as that "the system recovers its tone," that "the depraved nutrition improves under the stimulus of healthy blood," and so forth. I am simply saying that without the fact, if fact it be, we should never have supposed that neutralising an acid in the urine would avail to prevent the future formation of an excess of that acid, or touch the cause on which that excess depended, or that defective sanguification could be permanently relieved by adding something to the blood of the moment. If it is alleged—as in the case of acute diseases which endure for a set time and then depart of themselves—that the remedy is continued until the evil is overpast, that it counteracts the effects so long as these are produced, or the "tendency" remains to produce them, that is no more than I am contending for; it is, in fact, admitting that our rational treatment, though it tides over a time of difficulty, is seldom, in any way that we can understand or follow, directly curative. The actual, obvious operation of the drug is for ever outstripping our explanations. Not only does the dominion of empirical treatment soon cease to surprise us, but it becomes even difficult—apart from the removal of mechanical impediments and tangible noxious material—to put before our minds a clear notion of what a rational cure should mean.

Such considerations must go far to remove that strict line of demarcation which would separate medicinal agents into two grand divisions, the rational and the empirical;* or, if the mind would still preserve some distinction of the kind, they indicate at least that in every instance the two actions are inseparably blended. The chemical constitution or physiological properties of a drug may give a true direction to our anticipations of its conduct, but its action in the system is always beyond these anticipations, and often contradicts them; the part we can explain is insignificant by the side of that we cannot explain. Nevertheless we strive still towards a rational system of therapeutics. The fact that a method is called empirical prejudices the mind against it; the fact that it is put forward as rational gives it a greater weight than its actual achievements would justify.

In considering in their turn the several preparations of the Pharmacopœia we shall have frequent occasion to notice two things: first, that while our most conspicuous remedies have been lighted upon by pure accident by monks, or alchemists, or charlatans, the theories which have been devised from time to time to explain their curative action, though they alter in form from time to time to suit the orthodoxy of the period, remain still unproved, intangible, metaphysical; and secondly, that in many cases where the composition of a substance has suggested to physicians a particular use for it in medicine, the actual trial of the drug has failed to bear out the expectations thus formed of it, while it has often exhibited instead virtues that never were dreamed of.

If then it be admitted that the majority of drug actions are capable of no scientific explanation, that they cure yet baffle every attempt to discover why they cure, is it quite safe to assume in all those cases where the composition of a remedy happens to admit of some scientific theory as to the mode of its action, that such explanation is necessarily the true one? What I fear is that, in our poverty of reasons, we may be too eager to seize upon casual circumstances and force them into our service. The remedy contains an ingredient of which the natural supply is running short, or it neutralises something which happens to be in excess. In the case of definite compounds, known to possess a specific power over disease, it is perhaps inevitable that their chemical constitution should suggest theories of this sort. It by no means follows that all such theories are true. Lime-juice is curative in scurvy, therefore scurvy must depend upon a deficiency of the salts of potash in the blood; anæmia is benefited by iron, therefore iron owes all its virtue to its action upon the red particles of the blood. Such hasty conclusions can mislead no one who will be at the pains to consider the whole bearings of a phenomenon before venturing upon an hypothesis as to its cause. A further observation of the matter throws us back upon some virtue in the drug the nature of which is quite unknown to us. It is seen that lemon-juice exerts its power over scurvy apart from its potash and apart from any deficiency of potash in the system; it is seen that iron, besides its hæmatinic power, "has a distinct and direct influence over the nervous system," which it exhibits equally when there is nothing to alter in the constitution of the blood.

It is needless to point out how the same spirit which has founded upon trivial relations like these explanations as to the mode of action of known specifics, has proceeded further to construct for itself such medicaments as the circumstances of the particular case seemed to demand. We have all seen something of the scientific treatment of disease—how through the mouth lime has been sent to the bones, phosphorus to the nerves, and carbolic acid on various errands of purification throughout the body, and how each of these has failed to reach its destination.

Our position, then, comes to be this. We are to accept the observed action of drugs under particular circumstances of disease as so many ultimate facts. A substance of a certain composition is useful or curative in this condition or in that in no way that I can understand, but I can at least observe that the fact is so. Starting from that point, are we able to apply that empirical knowledge, or in any way to generalise upon it? We shall have to consider that point hereafter. I think it will be found that attempts to advance in any direction of treatment which accident seemed to have pointed out have mostly ended in failure. The composition of cod-liver oil made us expect that oils of similar composition might be used with the same effect, but that is not found to be the case. The similarity between the bromides and the iodides led to the belief that both might be employed in the same class of cases, and the bromides have proved themselves useful in an altogether different way. The antiperiodic power of chinchona suggested a number of substances from the vegetable world to be used for the same purpose, but, as a fact, that mysterious property is found next residing in the metal arsenic.

We find, as our fathers did, reasons for the administration of drugs satisfactory to our own minds, and conformable to the prevailing methods of stating and applying physiological laws. With them it was by means of "revulsion" and "derivation" that a host of remedies sought their justification. With us now, it is by modifying the constitution of the blood, and repeating in the system the simple reactions of the laboratory, that the desired results are effected. If our foundation is more solid than theirs, it is yet unequal to the weight we would lay upon it. The application of the principle still clings to the single instance which has suggested it. Neither our fathers nor we have succeeded in obtaining that sanction for our proceedings which must be reserved for the time when from a number of empirical observations we are able to enunciate the existence of some general law.

Of such considerations, though they have kept you too long already, I would sum up in as few words as I can the practical issue. I shall not be misunderstood if, for shortness, I express this in the form of precepts. Regard drugs dispassionately, with a single eye to discover what they do or do not, apart from the look of the theory made to support or upset them. Such theory will be attractive or the reverse, according to the state of science at the time when the necessity for devising it first arose; the drug will be good or bad quite independently.

Study to adopt such simple language in reference to drug actions as shall express in the most direct way just what we know about them, and no more. There is a prevailing phraseology peculiar to therapeutics which seeks to hide the scantiness of knowledge in metaphysical phrases. We read repeatedly of "powers" and "influences"; drugs are described as "useful in improving the general condition of the muscular system" or "the general tone," or as "having a peculiar influence upon the nerves." Such language, which by habit comes but too readily from the pen, is meaningless, and seems designed to cheat us of the real object

* It is hardly necessary to mention that I am using the word "empirical" in its ordinary philosophical sense, with no reference to quackery.

of our search. A more candid expression of what is accurately known might always be given in a few plain words.

Do not believe that in the vast array of medical materials credited with such various powers you are provided with an armoury of weapons arranged and classified so as to serve you against all the assaults of disease. It is not so. Therapeutical agents are, as a fact, continually serving fresh uses, undergoing rearrangement, being taken up and cast away again. Nothing is fixed. A practical investigation of the properties of drugs must be confined within very narrow limits, to such of them as by the consent of all are capable of impressing the system. The precise effect of half the Pharmacopœia, of taraxacum, and arnica, and galbanum, and sarsaparilla, and so forth, is past finding out. Apart from the books, which must say something, and from individuals, who will be cured from time to time in a great variety of ways, no one dreams of asserting anything that is definite in regard to them, we pass them over with a few words of conventional compliment, which in nine cases out of ten the behaviour of the drug will fail to justify. With such traditional virtues as attach to them they will continue to be extolled and neglected in turn upon other grounds than are furnished by clinical experiment.

In the study of drugs, which is to occupy you during this summer, avoid the error of conceiving that it is by these mainly that we are in the habit of treating disease. Such was never less the case than now. It survives only in the out-patient department of hospitals. And the out-patient department of hospitals, so long as it endures unreformed, demands continual apology at our hands. Through no fault of ours it so happens that, in violation of all our professed principles, and opposed to our most strenuous teaching, we have to administer drugs daily to a promiscuous assembly of individuals, ignorant enough to accept treatment of no other kind. Separate in your minds that pernicious system from all that we would imply by the scientific treatment of disease.

ON THE

RHYTHM OF THE PRESYSTOLIC MURMUR.

BY GEORGE W. BALFOUR, M.D.,

PHYSICIAN TO THE ROYAL INFIRMARY, EDINBURGH.

I HAVE read with great interest Dr. Barclay's recent communication in THE LANCET on the subject of the rhythm of the so-called presystolic murmur, and have to thank him for his kindly criticism of my published cases, which I hope to turn to account on a future occasion; though, indeed, part of that criticism was founded on a misprint, while also I could scarcely expect my views to be understood by any one holding opinions such as those Dr. Barclay has just promulgated.

Apart from the name, which we all acknowledge to be a misnomer, and only use for convenience sake, I believe I am right in stating that Dr. Barclay's objections to the pre[illegible]ly most generally accepted rhythm of the presystolic m[illegible]—expressed in the synonym auriculo-systolic—are base[illegible]pon the following reasons:—First, that from the abs[illegible] of valves at the entrance of the pulmonary veins into the auricle (I speak of course mainly of the left heart, but my remarks are obviously applicable to both hearts), and from the comparative feeble muscularity of the auricle itself, it is incapable of acting with such force as to produce so loud and rough a murmur as the presystolic always is; and, second, that in regarding this murmur as auriculo-systolic in rhythm because it has been found to run up to the apex beat, to be synchronous with the carotid pulse, and to precede the first sound when that is present, due account has not been taken of the circumstance that following the close of the auricular systole there is a period of ventricular action, consisting mainly of tension, but partly also of active contraction, preceding the apex beat, the latter phenomenon being more truly the conclusion rather than the commencement of the ventricular systole, and that it is to this early and hitherto, he believes, unnoticed period of the ventricular systole, and not to that of the auricular systole, that the rhythm of the murmur termed presystolic actually belongs. I believe this to be a truthful statement of Dr. Barclay's views, but if I am wrong I trust to him to correct me, and in my subsequent statements I shall not criticise his paper as a whole, but shall merely point out certain facts in regard to the physiology of the circulation which not only invalidate these views, but which also seem to render the older and more generally received idea of the auriculo-systolic rhythm of this murmur more probably the correct one.

In the pulmonary circulation, which takes place, as it were, within a closed sac, the contained fluid acts precisely as the water in a Bramah press, producing an equal pressure in every direction. The result of this is that so long as the pulmonary semilunar valves remain sound the left auricle is able to exert its whole force in producing onward propulsion; even in the most unfavourable case possible of auricular regurgitation none of this propulsive power is lost so long as the *point d'appui* of the pulmonary valves remains intact. The absence of valves, therefore, at the auricular inlets of the pulmonary veins in no way invalidates the assumption of any possible increase of the auricular force so long as the pulmonary valves remain sound, and how extremely rarely these are found incompetent scarcely any pathologist is in a position to state; I myself have never seen such a case. This fact therefore completely invalidates Dr. Barclay's first assumption. But I go further, and, while confessing that regurgitation through these venous inlets is, under certain circumstances, a possible occurrence, affording, like mitral regurgitation in aortic disease and tricuspid regurgitation in certain other conditions, a temporary relief which postpones the final result, I deny that the absence of valves necessitates this form of regurgitation in the normal condition. Throughout the whole circulation venous peristalsis plays a most important part, in the pulmonary no less than in the systemic circulation; and as the veins approach their inlets into the auricle their muscular coat becomes denser and more powerful, while the muscular fibres of the auricle are so arranged as to close completely the venous openings as the peristaltic wave passes from the veins to the auricles. Were it otherwise, were the venous openings always patulous, permanent congestion of the lungs would be the normal state of matters, pulmonary hæmorrhage would be the rule and not the exception, and accentuation of the pulmonary second sound, instead of being an early and infallible sign of pulmonary congestion, would be a matter of every-day occurrence. The teachings of anatomy, therefore, confirmed by those of physiology, forbid the assumption of patulence of the auriculo-venous inlets as a normal condition, render it even improbable as a constant concomitant of valvular disease, and teach us that even where it does occur it cannot interfere, except under the rarest conditions, with the fullest exercise of the auricular power.

As to the ventricular movements, it may be said that, as the peristalsis of the auricle commences in the veins, so that of the ventricle takes its origin from the auricle. The vermicular action of the auricle forces the blood into the ventricle to its complete distension; during this process the segments of the mitral valves are gradually floated up to apposition, and then the auricular peristalsis passes instantly into the ventricular systole, the first act of which is the throwing spirally upwards of two columns of blood, which carry the segments of the mitral valve still upwards in a spiral direction till they reach the level of the auriculo-ventricular opening, where the same spiral movement screws them home, as this action has been aptly termed (Bell Pettigrew), and then instantly follows the lifting of the aortic semilunar valves, and the outflow of the blood through the aortic orifice. During the further process of ventricular contraction, by which its cavity is completely emptied, the segments of the mitral valve are gradually untwisted and pulled downwards by the action of the musculi papillares aided by the chordæ tendineæ, the delicate margins of the valves being prevented from falling inwards on the walls of the ventricle by the continuance of the spiral columns of blood ascending from the ventricles, while their opening is aided by the descent of blood from the auricles. At the termination of the ventricular systole the auricle is already distended, and by the retraction of the segments of the valve a dependent spiral cone is formed opening into the ventricle, by which the blood in the auricle finds ready

access into the ventricular cavity whenever the cessation of the systole restores the passive receptivity of the ventricle, the termination of this most important act of the circulation thus initiating its commencement *de novo*. Such is the series of actions occurring during the systole of a normal ventricle. It is obvious that in a diseased one our conception of them must be considerably modified by the condition of the valve. In the most common form of valve in mitral stenosis—the diaphragmatic—it is apparent that the ascending spiral columns of blood, which are the earliest result of the ventricular systole, and which must act more or less inwards from the sides of the distended ventricle, being designed to screw home the segments of the valve, can have little effect in promoting regurgitation through a central button-hole slit, and equally little in producing the more or less forcible succussion of the tense diaphragm, forming the somewhat impure first sound synchronous with the apex beat, which is always present unless replaced by a soft blowing murmur, which it not unfrequently is. On the other hand, when the valve is funnel-shaped, these spiral currents acting sideways must aid in producing a more rapid, forcible, and complete closure of the valve; hence the louder and purer character of the first sound always present in such cases, and the almost universal absence of any blowing murmur taking its place.

A due consideration therefore of the physiological mechanism of the closure of the mitral valve, including its modifications in disease, seems to me very greatly to invalidate Dr. Barclay's idea of the dependence of the presystolic murmur on ventricular action in its early stage. And this view appears still more problematical when we reflect that the early, inwardly directed, spiral currents of commencing ventricular action are supposed to produce a murmur so loud and rough as the presystolic always is, while the further and more energetic ventricular action, when, by contraction of the cavity, these spiral currents are brought more directly within the range of the permanently patent opening in the mitral valve, and thus rendered more truly regurgitant (upward) in character, should only be accompanied by a murmur always soft and blowing in character. From Dr. Barclay's point of view it is also inconceivable why the loudest and roughest portion of the murmur should be that which is least stable and most variable in character, while the softer and more blowing portion should be, if once recognised, the least liable to change, and the one which is most likely to recur even if both should temporarily disappear.

Further, we know that murmurs are either directly conducted to the surface of the chest at the point of origin or conveyed to another and more distant one by the blood current, and are heard most distinctly at the one or the other point according to its proximity to the surface of the chest, and according also to certain other conditions as to the conduction of sound which in their entirety are as yet unknown. Thus the murmur of aortic constriction is usually heard loudest at the aortic cartilage (convection), but occasionally it is most distinct just over its point of origin, at midsternum opposite the lower edge of the third costal cartilage (conduction), but it is never heard more distinctly below this. The only exception to these well-known modes of conduction of murmurs is to be found in the case of the mitral regurgitant, which is usually best heard over the area of the apex beat, because there the left ventricle impinges most directly upon the walls of the chest, and the sonorous vibrations are more readily conducted through its denser tissue than through the soft, porous lung-tissue which overlies its point of origin. Not unfrequently, however, as Naunyn was the first to observe, the murmur of mitral regurgitation is (from convection) heard most loudly over the auricle above the third rib, usually in the pulmonary region, where the appendix auriculi lies; and, if Dr. Barclay's view of the truly regurgitant character of the presystolic murmur were correct, it would be inconceivable why it should never be heard in this situation, and why it should, when present, be always audible over the left apex, and invariably inaudible above the fourth rib—circumstances which are susceptible of ready explanation on the principles both of convection and conduction, if we accept the auriculo-systolic rhythm of this murmur. Moreover, in many cases of presystolic murmur, the auricle may be readily felt acting with great force; and in these cases the murmur and thrill are both to be heard and felt coincident with the auricular action and preceding the apex beat; while in the soft blowing and truly regurgitant murmur, the murmur and thrill, where present, are both coincident with the apex beat. Further, in certain rare cases, the presystolic murmur is heard separated by a short yet perfectly appreciable interval of silence from the first sound or soft blowing murmur, if present—a fact which is wholly inexplicable if we suppose both to depend upon ventriculo-systolic action.

In regard to the phenomena observed in the case which Dr. Barclay has evidently so accurately narrated, I too have occasionally heard a similar double murmur occupying the long pause—i.e., the period between the second and first sounds. Sometimes both murmurs were audible at the apex; sometimes (and this has happened in the same case at different times) the soft blowing murmur was audible only over the auricle, and the rough one at the apex. The reverse of this has never happened; these two murmurs either ran into one another, or were separated one from the other by a short but appreciable interval, capable of being increased by slowing the heart's action. I explain this phenomenon, however, differently from him, and in this fashion: at the end of the normal systole the ventricle suddenly relaxes, the apex descending to its normal position in the cavity of the chest, its descent being necessarily accompanied *pari passu* by the flow of blood from the auricle into the ventricular cavity, attended, as Hope says, by a slight movement mainly of the auricular appendix; then follows the long pause, the first portion of which is occupied by the gradual distension of the auricle, probably by a slight further distension of the ventricle, and the latter part by the auricular systole, which is immediately followed by the ventricular systole. But the completion of the ventricular diastole is of necessity delayed by any constriction of the auriculo-ventricular opening which obstructs the flow of blood into the ventricle, just as the diastole of an india-rubber bag syringe is delayed by the partial obstruction of its nozzle; and if, from roughening of the upper surface of the mitral valve, roughening of its orifice, or any other unknown cause, the diastolic passage of the blood into the ventricle should be rendered sonorous, we have presented to our ear the phenomenon of a murmur which is always soft, blowing, or musical, never harsh or rough; which runs quite up to the rough murmur of the auricular systole, or is separated from it by a more or less appreciable interval—representing the long pause—according to the amount of stenosis present. The more trifling the constriction present therefore, the shorter the murmur, the longer the pause; and, *vice versâ*, the greater the constriction present, the longer the murmur and the shorter the pause, which latter, if the constriction be very great, may be altogether absent. To this statement I have only to add that I have found the criteria narrated, where present, perfectly sufficient in making the diagnosis of a greater or less degree of stenosis.

In regard to the cause why direct murmurs should always be so rough, even when produced by the comparatively feeble muscular action of the auricle, and indirect—regurgitant—murmurs always soft and blowing, even when produced by the much more powerful action of the ventricle, the only reason which seems to me at all probable is, that in the one case the muscular force—as developed in blood-currents—directly converges upon the orifice through which the blood is forced, while in the other this is not the case. The softness of the diastolic auriculo-ventricular murmur—which is direct in its course though not in its character—is obviously due to the absence of any muscular force directly converging upon its point of origin at the moment of its occurrence; the only muscular action synonymous with it being that of the terminal portions of the pulmonary veins, which is so feeble as to be utterly lost as to sound-producing power before it reaches the auriculo-ventricular opening.

In conclusion, I may add that, however we may explain the mode of origin of the presystolic murmur, its diagnostic significance remains wholly unaffected. We all acknowledge its pathognomonic character as distinctive of mitral stenosis; as practical physicians, therefore, we can afford to wait with perfect equanimity the arrival of that *magna veritas* which, as Dr. Barclay has not less tritely than truly remarked, *prevalebit*, but which in cardiac physiology is somewhat difficult of attainment.

Alva-street, Edinburgh, April, 1872.

NOTES OF VISITS TO FOREIGN BATHS.

BY JOHN MACPHERSON, M.A., M.D.

V.—THE TAUNUS GROUP.

I PAID more than one hurried visit to Ems and to Wiesbaden, but there is little new to be said of these well-known places. While Ems has lost much of its reputation in tuberculosis, it fully retains its position in the diseases of women and in irritation of mucous membranes. The chalybeate discovered here a year or two ago is found to be unimportant, owing to its deficiency in carbonic acid. Wiesbaden, with its enormous supply of hot water, not to mention its mineral constituents, must always remain a popular and useful bath; it is growing fast, many families are resorting to it as a residence, partly on account of the supposed mildness of its winter climate.

Of Schwalbach and Schlangenbad there is only to be said that both of them have had the extent of their bathing establishments increased, and that Schwalbach has an improved *trinkhalle;* that Schwalbach is the great place of resort of Russian and of English ladies; and that the little bath of Schlangenbad has no fewer than eight doctors, and is in high favour with Russians, chiefly of the fair sex.

The climate of the southern slopes of the Taunus has long been a favourite one, and few of the English visitors of Homburg know anything of the many pleasant spots within a short distance of that place. Of these comes first, as a bath, the station of Soden, with its numerous wells, so rich in salt and carbonic acid. They vary in temperature from 59° to 84°, and in amount of salt (not counting the almost indifferent Schlangenbad) from 26 gr. to 111 gr. Some of the wells contain a good deal of iron, but it is generally overwhelmed by the salt. The Champagne fountain has 50 gr. of salt to ·15 gr. of iron. However, Soden has an admirable chalybeate at a distance of but twenty minutes, at Neuenhain; it is very pure, having only 5·7 of solid constituents, of which ·34 are iron. The graduated strength of the wells makes it possible to vary much the nature of the water prescribed, and to regulate the degree of action on the bowels.

Soden stands on the main road leading direct from Höchst to Königstein. The springs are in two groups on either side of the road. The kurhaus, built on a slope, looks down on a charming park-like garden, having excellently arranged walks, and planted with a great variety of trees, which now afford abundant shade, having been planted in 1838, when I remember the place looking quite bare. In this garden is the Sprudelquelle, the main source for the supply of the new bath-house, which has just been erected. It contains twenty-six baths, and two separate douches, shower-baths, and all other conveniences. The water is heated by steam. The baths themselves are of plain wood, as the waters destroy paint, and act on metal. The temperature of the bath is usually 90·5°; that of the douche 63·5°. The latter has a force given by a column of water of 36 ft. in height. The bath water contains about 112 grs. of common salt in the 16 oz., and abundance of carbonic acid.

But Soden is praised as much for its climate as for its waters. The climate is on the whole mild, and subject to few alternations. It is believed to have a calm and stillness somewhat like that of Pau, which is so much insisted on. The climate is considered to be sedative, therefore better suited to erethic than to torpid constitutions threatened with phthisis. During the summer months Soden is, like all foreign baths at low elevations, sufficiently hot; and in the months of July and August those especially suffering from their chests should seek a cooler temperature than it affords.

Dr. Thilenius, son of Dr. Otto Thilenius, who had so great a share in developing the place, has produced a very admirable book on Soden, far superior to the ordinary books of the class. From his work I learn that the waters of Soden are useful, as aided by the climate, in scrofula, in chronic laryngitis, in bronchial catarrh, and in pleuritic exudations. Mr. Nunn, of the Middlesex Hospital, who paid Soden a much longer visit than I did, has kindly placed his notes at my disposal, in which he says it is not difficult to imagine, in the case of chronic lung-disease, that patients, from dry, exposed, and exciting climates, find a haven of rest in this hill-protected village—built on a soil yielding an endless supply of salt springs and inexhaustible crops of luxuriant grass.

The waters are also largely employed in various forms of dyspepsia and catarrh of the stomach, in chronic pharyngitis, also in chronic diarrhœa, and sometimes in affections of the liver of a congestive nature. Now especially that the baths have been built, Soden will also be found useful in anæmia, chlorosis, and various uterine affections.

Soden has a reputation that is chiefly continental. In the total of 4000 visitors during last year, every nationality was well represented except that of the British Isles. Possibly the place may be too quiet for English. Trousseau long ago said that the waters of Soden offered the same advantages as those of Homburg, and remarked that possibly visitors for whom calm was necessary, and who disliked the artificial life of watering-places, might prefer the soft and peaceful solitude (solitude it is no longer) of Soden to the tumultuous pleasures of Homburg and of Wiesbaden.

Mr. Nunn observes that one great charm is possessed by Soden—namely, that it has no pauper indigenous population. It has no dirty hovels; it consists almost entirely of detached villas, which open their doors to the visitor at the end of April or the beginning of May, and shut them towards the middle of September. Many of the Frankfort people have quiet country houses here or in the neighbourhood. The hotels are comfortable, and the charges moderate.

Half-an hour's walk, or a little more, from Soden, is the pretty little valley of Kron Thal; it has a small bathing establishment and two wells, the taste of which is very agreeable. The one contains 22 grains of common salt, but only ·05 of iron; the other 27·2 and ·10. The latter, therefore, is the only one of the two that can be counted a chalybeate, and it is not a strong one. Formerly the well was considered a much more powerful chalybeate, and I cannot help thinking that these wells do contain more iron than is shown by the latest analysis. The waters are, in any case, good for dyspepsia, and I wonder that the place is not more resorted to. The country is prettily wooded.

Königstein, lying 1300 feet above the sea, and with its beautiful views all over the plains, recommends itself much to English families as a summer resort; it is distant about three miles from Soden, the road from which place to it is a continued ascent. There is a well-managed hydropathic establishment here; but the fine air and the beautiful country are the chief recommendations of the place. Most travellers are familiar with the view from Falkenstein, pitched on a rock. I recollect having a distant view from it of Homburg, before that place had sprung into renown.

The pleasant village of Hofheim, at the entrance of the Lossbach valley, with its hydropathic establishment, deserves a word of mention as a pleasant summer residence.

Weilbach is one of the baths of which one cannot explain the virtues simply by a consideration of its constituents, although Roth put forth an elaborate theory of the action of its waters; yet they have been attested by a very sceptical writer, Dr. Braun, in his own person, when he suffered from hæmoptysis and enlarged liver. Weilbach is a bathing establishment built in the centre of a nicely laid-out wood, on a slope, almost a plain, lying to the south of the Taunus. The village is at some distance, and the railway station, on the line from Wiesbaden to Frankfort, a twenty minutes' walk. The waters of Weilbach are of the temperature of 56·7°; their solid contents 11·5 grains, of which 2 grains are common salt, and of carbonate of soda, of magnesia, and of lime, about 3 grains each. The quantity of sulphuretted hydrogen is ·16 cubic inches. The soda-lithia well contains nearly 10 gr. of common salt, 8 gr. of carbonate of soda, and 0·045 gr. of carbonate of lithia, and scarcely any sulphuretted hydrogen.

Although, as in other cases where a little lithia has been discovered, the lithia well here has been proclaimed a cure for gout and for gravel, it is the sulphur spring that is mainly used. It is employed for drinking, for baths (of which they have fourteen comfortable zinc ones), and especially for inhalation in a glass house built over the spring.

It has been generally admitted that the drinking of the waters here has a specific effect on congested livers and hæmorrhoidal affections, also on chronic metritis when asso-

ciated with the latter complication, and that it is efficacious in cases of tuberculosis, especially when associated with affections of the liver, or tendency to hæmorrhoids or fistula. The inspiration of the moist air of the inhaling-room is said to give great relief to the bronchial surfaces, and alter the character of the sputa. The inhaling-room here is merely a glass house placed over the fountain, not a large chamber, kept at a certain temperature, as at Amelie les Bains and elsewhere. Patients are very gradually accustomed to the inhalation of the gas; the most frequent pulse is made slower by it, and sometimes giddiness of the head makes it necessary to intermit its practice for a time.

Weilbach continues to enjoy its reputation, but it offers no amusement beyond its own walls, and is only to be sought by those who are patients in earnest. In the year 1869 it had 314 patients, reduced in the year of the war to 148. I cannot say that it is a place likely ever to be much of a favourite with the English.

THE TREATMENT OF SMALL-POX BY VACCINATION AND THE INJECTION OF LYMPH.

BY R. C. FURLEY, L.R.C.S.

THE doctrine universally held, that vaccination will be of "no use" if delayed till five days after the inhalation of the germ of variola, I think, is erroneous. For some time past I have been in the habit of vaccinating every case of small-pox that has come under my care; and the result, as I shall show, is very encouraging, and seems to indicate that vaccination is not only prophylactic but *curative*. I have found, however, that, although the ordinary process of vaccination by scratching the arm is sufficient to modify the disease in infants, it is almost inoperative in adults. After having discovered that the ordinary process was almost useless in grown-up persons, I adopted the method of injecting lymph by means of Dr. Wood's hypodermic syringe. This instrument I also found occasionally to fail, because, on passing the wire through the needle after the operation to keep it clear, I have found it eject the lymph which I had hoped had been in the blood. This, I am afraid, has been the cause of two otherwise unaccountable failures out of sixty cases. How to obviate this source of fallacy occupied my thoughts for a considerable time. At last, however, I succeeded in inventing an instrument that promises to transfer lymph directly from the tube in which it is contained into the circulation. It consists of a hollow needle with a bore sufficiently large to admit of the introduction of a vaccine tube. The process consists in passing the point of the needle charged with a tube of lymph under the skin, and blowing the lymph directly into the blood. I have purposely described this minutely, in order that, if any of my brethren do me the honour of verifying the results of my treatment, they may not commit the errors which experience has pointed out. It would occupy too much space to describe many cases; I shall therefore only give three to illustrate the effect of the treatment at the different periods of life—infancy, childhood, and manhood.

CASE 1.—Baby C——, aged one month, and unvaccinated. When first seen, the papular eruption was over the face, hands, and legs. There had been three cases of small-pox in the house. One had been sent to the Small-pox Hospital, where the mother had visited him. I ascertained that this was really the case from the resident physician, Dr. Saxby. I vaccinated the child at once. Next day, when I called, the eruption had entirely disappeared, with the exception of two papules on the face, which were now more prominent. On the third day these two papules disappeared, and a fresh crop of four-and-twenty, chiefly over the head, made its appearance; and these became hard, and did not fill like ordinary vesicles. In three days these had also disappeared. The vaccination itself did not show any signs of taking till the tenth day, and was matured on the thirteenth.

CASE 2.—M. R——, aged thirteen years, vaccinated in infancy, and whose sister had died of small-pox a week before. I was called in on a Saturday, and found her face considerably swollen, and the papular eruption on the hands and forearms. I at once *injected* two tubes of lymph into the arm. On Sunday the eruption had disappeared from the hands and arms, and appeared on the feet. On Monday it had spread up the legs and trunk. On Tuesday it had entirely gone away, and there was nothing to be seen but the inflamed areola at the point where I had injected.

CASE 3.—J. W——, aged thirty-four, a stableman of dissipated habits, and never vaccinated. I saw him on the second day of the eruption, and injected two tubes of lymph. The case, instead of being confluent, as might have been expected, was discrete, except at the ala of the nose. He went on very favourably, and the eruption began to desiccate on the ninth day instead of the fifteenth, eighteenth, or twentieth. There was no areola at the point of injection.

I think these cases, selected from a number of such, show that there is at least a germ of truth in my statement that vaccination is curative of small-pox. I find that the treatment is much more successful in the youthful than in the adult period of life; and I am beginning to think that this arises from adults requiring, as it were, more of the remedy. It is also more effectual the earlier the operation is performed. I have usually found that the vesicles did not attain the size they do when the disease is allowed to run its course; they did not often become pustular, and desiccated earlier.

No doubt I have had failures and deaths; the latter five in sixty cases, in three of which I did not look for recovery from the first on account of other complications, and two were unlooked for: all were females—a fact of itself of some significance. I reserve for a future communication a detailed summary of all my cases; meantime I trust I have said sufficient to encourage my brethren calmly to investigate the subject.

I should have mentioned that the instrument I employ for transferring the lymph directly into the blood was made for me by Mr. Young, cutler, North-bridge.

Lauriston-place, Edinburgh, May, 1872.

A CASE OF POISONING WITH SULPHATE OF ZINC;

ONE OUNCE SWALLOWED; RECOVERY.

BY A. J. MACKINTOSH, M.D.

ON the 24th of April last, my groom, aged twenty-one years, swallowed one ounce of the sulphate of zinc, instead of Epsom salts. While cleansing my surgery on that morning he took a quantity of the zinc with him, believing it to be common salts. At nine o'clock in the morning he weighed on the kitchen scales one ounce of it, mixed it with a little lukewarm water, and swallowed it all there and then. In a few minutes afterwards violent vomiting and severe purging commenced, and in less than half an hour he was so prostrate that he could neither walk nor stand. About half-past ten he was able to walk to his lodgings, the distance being about a quarter of a mile from my residence. When he arrived there he could not walk upstairs; they had to carry him.

The symptoms in this case were, violent vomiting, and severe purging during the forenoon. These gradually subsided before the evening. On the following day he experienced great pain from cramp in the arms and legs; also complained of much pain in the abdomen, more especially in the region of the bladder; dizziness, with slight soreness of throat. On the following Wednesday he walked about, and is now quite well and able to attend to his duties.

I have no doubt the greater quantity of the sulphate was thrown off by the vomiting, and the remainder by the purging. In a medico-legal sense this case must be interesting, owing to the large quantity taken, and the person recovering from it.

Downham Market, Norfolk, May, 1872.

THE German Treasury has granted £30,000 for the expenses of the German University of Strasburg. The lectures commenced on the 6th of May last.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

CANCER OF THE LEFT FOREARM; AMPUTATION AT THE ELBOW-JOINT; RECOVERY.

(Under the care of Mr. THOMAS BRYANT.)

E. D——, aged thirty-six, was admitted into Guy's Hospital on June 21st, 1870. Her father, two sisters, and three brothers, had died of consumption. There was no history of either syphilis or cancer in any of the family. She had not enjoyed good health for some time, having suffered much from indigestion. In July, 1868, she fell downstairs, and in putting out her arm to save herself gave it a twist, which caused a projection on the ulnar side of the wrist; this disappeared in a few weeks, and both hand and arm were apparently better. In February of the following year a swelling, about the size of a nut and particularly tender, appeared in the seat of the present disease, on the outer side of the forearm, two inches below the elbow-joint. This gradually increased. In July, 1869, the pain that it gave her was so great that she could not use her arm; and in September she entered St. Thomas's Hospital, under the care of Mr. Croft. At this time there was an elastic swelling, the size of half an egg, situated between the fascia and the muscles. The cyst was tapped, and a clear straw-coloured fluid was discharged. Then the cyst was laid open, and the finger passed in as far back as the interosseous membrane. The ulnar bone was felt, but no part of it was exposed. No growth into the cyst could be detected. The wound slowly healed up, and she was discharged. In December an elongated swelling appeared in the same place, glossy and tender. It gradually increased, becoming more tender. She poulticed it with linseed-meal, which did no good; and she then applied to Mr. Bryant, who took her into the hospital.

The patient appeared on admission to be fairly nourished, though she said she had been losing flesh and strength lately. On the external surface of the left forearm, reaching from an inch above the wrist to three inches from the elbow, there was a swelling twelve inches in circumference, the skin over it being reddened and fixed to the subjacent parts. She complained of a throbbing pain in the part, and of a feeling as though it were gathering. No enlarged glands in the axilla. Pronation and supination limited. There is a small ulcerated spot, which bleeds very readily.

On June 24th Mr. Bryant amputated the forearm through the elbow-joint. The arteries were secured by torsion, and the flaps brought together in the usual way. The tumour, on section, showed a good example of periosteal cancer. The patient was rather restless after the operation, and had thirty grains of chloral at bedtime.

On the 29th the stump had a rather sloughy appearance, and some of the stitches were removed; soon afterwards hæmorrhage occurred. Mr. Birkett, who happened to be in the hospital, came and ligatured the brachial, having previously scraped off a little of the end. The flaps were then lightly brought together, and a subcutaneous injection of morphia administered to the patient.

On July 2nd the stump was doing well; only a slight sloughing of the flaps had occurred; it was dressed with a solution of permanganate of potash. From this time the patient went on well; there was for some days rather a free discharge of pus. She was put upon good diet and tonics, and left the hospital Sept. 13th with a good stump.

SUNDERLAND INFIRMARY.

CASES OF DIABETES.

(Under the care of Dr. PYLE.)

FOR the notes of the following cases we are indebted to Mr. T. F. Hopgood, house-surgeon:—

CASE 1.—J. G. B——, aged seventeen years, was admitted March 2nd, 1871, suffering from diabetes. He was quite well until three months ago. About this time he noticed that his appetite was much increased; he ate a great deal but was not satisfied, and he was constantly drinking without assuaging his thirst. He complained of no pain at this time; he passed a large quantity of water at a time and very frequently, but never saved it to know how much he passed in the twenty-four hours. At this time he weighed 9 st., but since then he has gradually decreased in weight. He has complained of slight cough for the last three weeks, and spat a little thick phlegm.

On admission the patient was much emaciated, the eyes fallen in, and very little adipose tissue remained. He was passing fourteen pints and a half of urine, and drank fourteen pints during the twenty-four hours. Upon testing the urine it was found to contain a large quantity of sugar, one-sixth of the tube being occupied by the deposit, sp. gr. 1045. Chest sounds natural except at left apex, in infra-clavicular region, where there was harsh breathing, and in the right scapular region where there were a few crepitant râles. Slept well; bowels open every day; tongue clean and moist; pulse soft, easily compressed, 70; weight 6 st. 11¼ lb. To have eight pints of skim-milk daily, and to take a mixture containing the compound decoction of aloes three times a day.

March 4th.—Has passed seven pints of water and drunk thirteen pints—viz., eight pints of milk and five pints of water; he is now to have as much milk as he can take.

26th.—To take five grains of the compound soap pill at bedtime; pulse, after taking it, 35; sp. gr. of urine 1010; quantity, five pints in the twenty-four hours.

28th.—To have one chop, greens, and eight pints of milk daily, and to take a mixture containing eight minims of the tincture of opium in the dose three times a day; weight, 6 st. 5¾ lb.

April 14th.—To have two chops, five pints of milk, and greens.

18th.—To discontinue medicine, and to take, three times a day, three grains of the compound soap pill.

20th.—Ordered a mixture containing ten grains of hydrochlorate of ammonia three times a day.

From April 20th to May 25th the quantity of urine passed daily was four pints and a half, with the exception of May 2nd and 25th, when it reached five pints, and since that time it has continued at this quantity. The diet and medicine have been the same. His weight has gradually increased. On April 7th it was 6 st. 6¼ lb.; April 29th, 6 st. 12½ lb.; May 6th, 6 st. 13¾ lb.; May 14th, 7 st. 0¾ lb.; May 20th, 7 st. 4½ lb. The specific gravity of the urine was 1010 on May 8th, and continued so to May 16th; it then rose to 1020, and remained so till the 26th. On May 26th and 27th he was allowed potatoes, &c. The quantity of urine and drink remained the same, but there was a slight increase in the sugar.

Two months after this he went to sea, but returned in the same condition. During the time he lived chiefly on pork-pies, vegetables, and potatoes, and lost 12 lb. whilst at sea.

CASE 2.—John R——, aged forty-one, was admitted March 28th, 1871, suffering from diabetes. Had been a sailor up to nine years ago. Since then he had worked at making sails. Three years ago he met with an accident, causing fracture of the patella, since which time he has been unable to work. Five years ago he had rheumatic fever. About four or five months ago he first noticed that he drank more than usual, and that he required much more food than before. At this time he drank about ten or twelve pints of fluid, and passed about a gallon of water, during the twenty-four hours. Twelve months ago he weighed 11 st.

The patient was much wasted; appetite increased, and thirst constant. Drank twelve pints during the twenty-four hours, and passed ten pints of water, which contained a large quantity of sugar, its specific gravity being 1040; weight, 8 st. 10½ lb. He was put upon eight pints of skim-milk, and to have no other food; and to take a mixture containing eight minims of tincture of opium three times a day.

On April 4th the tincture of opium was increased to fifteen minims the dose, and he was placed on meat diet—two chops—and five pints of skim-milk.

May 1st.—He has continued as above to this date. He is now to leave off the opium, and to have a mixture containing one grain of carbolic acid three times a day, and the following diet: five pints of milk, two chops, and green vegetables.

10th.—Since he has been taking the carbolic acid he complains of feeling sick and of having a pain in the side. To omit the acid, and to have ten minims of the tincture of opium three times a day.

29th.—Has continued the above treatment to this date. To have full diet—meat, bread, and potatoes, with half a pint of beer.

He left the infirmary on the 31st improved, the sugar having diminished to one-eighth the quantity. There was a slight increase in the quantity after the full diet, and the specific gravity of the urine was 1020. He drank five pints of fluid in the twenty-four hours, and passed five pints and a half of water.

Since this time he has attended as a dispensary patient, and has been living upon eggs and bread made of bran soaked and washed and then mixed up with milk and gum acacia. He has taken five grains of bromide of iron three times a day. He says he has not been so well since he left the infirmary, but has lost in weight only 1¼ lb. up to this date (Aug. 15th), when he was again admitted as an in-patient. He still suffers from thirst, and passes an increased quantity of urine; specific gravity 1034, and contains a large amount of sugar. He was ordered five pints of skim-milk, vegetables, and meat, and to take a mixture containing opium.

He left the infirmary on Sept. 15th, having continued the same diet during the month; but, after the first few days, taking five grains of the bromide of iron instead of the opium. He was in much the same state of health as on admission; he was taking less drink, and passing less water, the quantity of sugar remaining about the same. He lost 1 lb. in weight during the time.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.

A PIECE OF WILLOW-STICK, THREE-QUARTERS OF AN INCH LONG, LODGED IN THE UPPER EYELID, SIMULATING ABSCESS AND TUMOUR.

(Under the care of Mr. J. V. SOLOMON.)

EDITH T——, aged ten months, was brought to the hospital on the 13th of February. The right upper lid was much swollen, very red, and so tense as to render eversion impossible. The cornea, as far as could be seen, was clear. There was slight muco-purulent discharge. The mother could assign no cause for the symptoms. A lotion and drops were ordered. A fortnight later the swelling had much diminished; there was some appearance of pointing externally. A few drops of pus were evacuated, and the lotion was continued. At the end of another week all inflammation had subsided. There remained in the lid a small, hard tumour, of the size of a horse-bean. Mr. Solomon was asked to see the case. He cut down upon the substance, introducing the index-finger beneath the lid. In the course of the dissection he felt a gritty substance, and remarked that there was a foreign body. On raising the lid he discovered a large body, of osseous appearance, imbedded in it, which he withdrew with forceps. It proved to be a piece of willow-stick, rather more than three-quarters of an inch in length, rounded at one end, jagged at the other, and of the thickness of a penholder. The mother now remembered that, three weeks before the child was first brought to the hospital, it had fallen from a chair, striking its head upon the edge of a wicker cradle. The piece in question had no doubt entered the lid through its conjunctival surface, snapped off, and remained firmly lodged in it. The incision and the internal wound both healed in a week. Some thickening of the lid remained. The cornea was uninjured.

The notes of the above case have been forwarded us by Mr. J. Priestley Smith, house-surgeon.

THE death-rate in the City has lately been below the average for the last ten years.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 14TH, 1872.

GEO. CRITCHETT, F.R.C.S., VICE-PRESIDENT, IN THE CHAIR.

THE following papers by Mr. M'CARTHY, assistant-surgeon to the London Hospital, were communicated by Mr. Curling, the President of the Society:—(1) "A Description of some Renal Calculi of unusual shape found in the Kidney of a Patient who died of Cancer of the Uterus," &c. (2) "An Account of a Case of Intestinal Obstruction in which an Artificial Anus was established successfully in the Small Intestine; recovery and subsequent death from Cancer and Fatty Degeneration of the Heart."

With regard to the second paper,

The CHAIRMAN applied to Mr. MAUNDER, who remarked that he was led to advise operative procedure, inasmuch as there was evident contraction and gradual filling up of the canal. He considered that much of the success that attended the operation was due to the skill and "elegance" with which it was performed.

Mr. TIMOTHY HOLMES commented upon the great interest of the case, but wished to know why the small rather than the large intestine was opened, and, as the obstruction depended upon cancer, why not have ascertained how far the ascending colon was free. He believed that it was extremely difficult in all these cases to arrive at an exact diagnosis, and suggested that the amount of fluid injected per rectum was a far better indication of the seat of obstruction than the O'Beirne tube, the usefulness of which latter was, according to his knowledge and belief, much overrated. In concluding, he expressed grave doubts as to the propriety of an early operation, and thought that in such cases it was often well if the patient was saved from the surgeon altogether.

Mr. THOMAS SMITH dwelt emphatically on the difficulties that occurred in returning the intestine when it escaped from the opening in the abdominal cavity, and quoted several cases in illustration thereof.

Mr. JOHN WOOD had seen this kind of operation performed, had performed it twice himself, and had not found insuperable difficulty in returning the intestine; but if such difficulty existed he should not hesitate to puncture with a trocar and canula, because whether air or fluid be present some amount of benefit must follow. He doubted, however, the wisdom of the operation, as all patients died.

Mr. HULKE took some sort of exception to the particulars of the operation, asserting that the operator could not know what part of the small bowel was caught up.

Mr. M'CARTHY, in reply, said that he had not used injections; that he did not operate as suggested by Mr. Holmes because the right colon might have been diseased as well as the left; and that his knowledge of regional anatomy enabled him to state a belief that the lower part of the ileum was usually situated at the place where in this case he had found it.

THE SYNOVIAL MEMBRANES IN PYÆMIA.

BY ROBERT HAMILTON, F.R.C.S.,
SURGEON TO THE SOUTHERN HOSPITAL, LIVERPOOL.

After a brief account of the views at present held by the majority of writers on pyæmia as to the way in which the morbid changes found in this disease are brought about, the author dwells upon the fact of the synovial membranes being so generally attacked in pyæmia—a circumstance that has not hitherto attracted sufficient attention, though it makes it extremely probable that the first step in those forms of surgical pyæmia most commonly met with in hospital practice is to be found there. All the cases occurring at the Southern Hospital for the last thirteen years, of which particulars have been kept, had some joint affection. In some the pathological changes in the joint were slight, in others most extensive. That the disease observable in the joints begins in the synovial membrane is rendered probable from the character of the pain, and from the appearances found after death.

The poison of pyæmia, as observed in hospital practice, is *sui generis*. Whether generated in the system from a com-

bination of constitutional and surrounding conditions, or entering as a specific germ through a wound, it is a poison having a special affinity for certain structures, and to these it passes at once. The structures are here assumed to be the synovial membranes. In what this affinity or attractiveness consists we are as yet ignorant, and can but illustrate it by what takes place in other diseases, such as the cholera poison, and the scarlatinal poison, or the producer of tetanus; whether it is a something evolved within the system, or introduced from without, it goes at once to certain nerve-tissues, and in them creates changes which set up other morbid action. Many drugs illustrate the same fact. Strychnia when swallowed, or when subcutaneously injected, has but one form of action, like the poison of tetanus,—it affects nerve-tissue only. The strong analogy between pyæmia at the commencement, and acute rheumatism, has often been observed. In both there are the rigors, the fever, the rapid pulse, the profuse sweating, but above all there is the pain and swelling of one or more joints. It seems probable that in both an entity has entered the system whose habitat is the joints. We cannot tell in what consists the difference of the two poisons, so that the one as a rule eventuates in recovery, and the other in a train of pathological changes whose termination is death. In both cases the tissue first affected is the synovial membrane. The abnormal action induced in it leads to an increased secretion of synovia, probably unaltered in its character and constituents in rheumatism, but of an abnormal kind in pyæmia. In the case of the synovial fluids there is in most joints a limit to its quantity; so tightly is the synovial sac compressed by surrounding tissues which are not yielding that an amount of tension quickly ensues, which leads to a forced absorption of some of the effused fluid, and then ensues in acute rheumatism, and probably as a necessary sequence, an extension of the disease to other synovial sacs, and often to the pericardium, a serous membrane, but closely allied in its nature to a synovial membrane. This augmented synovial fluid is in rheumatism a bland and innocuous fluid—a mere increase of the natural secretion; but in pyæmia it is in a decomposing state, developing rapidly germs of a lower organisation; and when such a fluid has been absorbed, and in its course reaches the minute capillaries of the lungs, some of its morbid cells coagulate the fibrine of the blood there, and become arrested, and thus are formed the nuclei with which the lungs are studded, around which more fibrine is deposited, and the pathological changes follow described by Virchow and others.

In conclusion, the author states that in limiting the paper to a consideration of the fact of the synovial membranes being the tissues first affected in many forms of pyæmia, he has not lost sight of the probability of many other phases of pyæmia having their beginnings in one or other of the serous membranes, these two membranes being so closely allied in their microscopic characters.

Mr. HULKE failed to understand the theory of the author as to the re-entrance of fluid into the joints, and hoped to have heard some suggestion explanatory of the source of pus found in the joints, and how bacteria, &c., originate under such circumstances. He also averred his belief that many cases of pyæmia occur without any affections of joints.

Mr. WOOD failed to understand how joints can, as it were, manufacture a poison without some predisposition on the part of the fluids of the body, and that then the joints only should be affected.

Mr. HAMILTON, in reply, regretted that he had not been sufficiently understood. He believed that the fluid spread from one joint to another, on account of the pressure exercised on the synovial membrane, which forced the fluid into the circulation. His observations as to the presence of living organisms in the fluid were made irrespective of the results recorded by Dr. Burdon Sanderson. He had never any case of pyæmia without some stiffness, if not positively some acute affection, of the joints.

ON SOME FURTHER ATTEMPTS TO CURE LARGE INTERNAL ANEURISMS.

BY WILLIAM MURRAY, M.D. (NEWCASTLE.)

(Communicated by Dr. SYMES THOMPSON.)

This is an account of some attempts to cure internal aneurisms by the insertion of foreign bodies with a view to the formation of clots in the interior of the sac. Some of these bodies were introduced and again withdrawn (needles), and their introduction was repeated at intervals with manifest thickening of the aneurismal walls on each occasion; others were of a material the presence of which would be as harmless as possible (carbolised catgut), and they were used because of the hope that their absorption might take place after the work of coagulation was completed. Lastly, wire was tried, as in Mr. Moore's case, and with more favourable results as regards the preservation of the patient's life, he having lain more than three weeks with twenty-four feet of wire in him. Although none of these efforts were actually successful in curing the patient, they mark out a line of practice which may some day be perfectly safe and successful.

Mr. HOLMES thought Dr. Murray's paper useful as tending to show the harmlessness of such an operation, and that surgeons might meddle with aneurisms to a much greater extent than was generally imagined. After remarking that the introduction of carbolised catgut was manifestly useless (because it would soften rapidly) he said that Mr. Moore's case (the preparation is now in the Middlesex Hospital) showed markedly the dangers of the operation, and it was evident that wire or any other material of sufficient hardness to help coagulation when introduced into the sac, must, by rubbing against the walls of the latter, tend to set up a dangerous degree of inflammation.

Dr. ANDREW demurred to the wisdom of any surgical interference, inasmuch as external ruptures of the sac are extremely rare, and any modes of procedure such as those described would tend to produce a clot around the strongest instead of the weakest portion of the sac.

The last meeting of this session will be held on the 28th inst.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MAY 10TH, 1872.

SIR WILLIAM GULL, BART., M.D., F.R.S., IN THE CHAIR.

Dr. BURNEY YEO read a paper on a case of Paralysis of the Senses of Taste and Smell following Concussion of the Brain. The patient, a man aged fifty, came to King's College Hospital on January 11th, having four months before been thrown out of a cart. He was admitted into St. Thomas's Hospital in a semi-conscious state, under the care of Mr. Croft. A slight contusion was discovered on the back of the head, but there was no fractured bone. He vomited, was delirious and insensible during the night, and in the morning complained of much pain in the head, which was relieved by aperients. He soon recovered, and, feeling well, discharged himself after he had been in the hospital about a week. He found, however, that he could neither taste nor smell. This condition had persisted ever since the accident. He had suffered also a good deal from giddiness, and from severe pains on the right side of the head. He had been a perfectly healthy man, and quite free from any syphilitic taint. The patient's statements were thoroughly tested. Salt, sugar, solution of quinine, dilute acids, tincture of assafœtida, were applied to the tip, the centre, and the back part of the tongue, to the under as well as the upper surface, but were not recognised in any degree. The tongue, however, was sensitive to the slightest touch, and its movements were perfect. The sense of smell, similarly tested, was found to be absent. The patient was ordered five grains of iodide of potassium three times a day. The first two doses produced such violent symptoms of iodism that it could not be continued. The dose was therefore reduced to two grains; and as this also acted in the same way, only one grain three times a day was given. This dose, at first, produced iodism, and afterwards purged him; he, however, continued to take it. In a few days the sense of taste began to return. On January 25th he could taste solution of quinine as bitter, and tincture of assafœtida as bitter; but he could detect no odour in the latter. He could distinguish salt from sugar, but not tea from coffee. The sense of taste continued to return rapidly. On Feb. 11th he was able to taste the flavour of meat for the first time for twenty weeks. He could also now perceive strong odours, but smell came back less rapidly and less perfectly than taste. In connexion with the return of smell, he

complained of a curious subjective affection of this sense; a foul smell comes into his nose like that of a stale tobacco-pipe, and it seems to come down from the head. By the 20th March the patient was quite well. Dr. Yeo thought this case offered many points of clinical and physiological interest. He thought it a somewhat rare circumstance to find the senses of taste and smell clearly absent together without any other affection of the nervous system. The absence of taste could not, in this case, be simply the consequence of loss of smell, as solution of quinine and tincture of assafœtida were, at first, not distinguishable from water; and when the latter was first recognised it was as a bitter substance, and its peculiar flavour was not perceived; moreover, the sense of smell returned much later than the sense of taste. It was difficult to say what could be the lesion which would produce paralysis of these two special nerves and of no others. This difficulty was increased rather than diminished by the very remarkable manner in which the administration of iodide of potassium had been followed by the recovery of both senses.

Dr. LOCKHART CLARKE thought that the condition depended on shock, and had seen several cases originating in this way. He did not think that any lesion existed, and thought that cure was produced by stimulation of the mucous membrane. He related the case of a child who from standing on its head produced symptoms of concussion, and of hyperæsthesia of the leg except the parts about the knee. The patient had suffered from chorea, and had been confined to bed for four months, but by local treatment the limb recovered in six weeks.

Dr. HUGHLINGS JACKSON thought the case quoted very puzzling, and had never seen one in which both taste and smell were completely lost, although a patient would declare that he had lost the sense of taste, when examination proved that the smell alone was gone. The subjective sensations complained of by Dr. Yeo's patient were very important, and occurred as a so-called aura in some epileptiform seizures, especially in those cases in which consciousness was lost without convulsions. The speaker believed that in these cases there was disease in the neighbourhood of the anterior cerebral artery, and that the subjective sensations augured ill as to the amount of mental failure.

Dr. BROADBENT had seen two cases in which incomplete loss of smell and taste had become permanent, and took exception to the statement that there was total loss of taste in Dr. Yeo's patient.

Dr. BUZZARD, referring to a case related by Dr. Anstie, in which neuralgia of the fifth nerve was accompanied by loss of smell and taste, suggested that in Dr. Yeo's case a lesion of the trigeminal nerve had caused the loss of these two special senses, the integrity of that nerve being apparently as necessary for the proper action of the olfactory lobes as for the perfection of the sense of taste.

Mr. CHRISTOPHER HEATH had seen several cases in which taste and smell were gone, and spoke of a lady who, as the result of an accident, lost both taste and smell.

The PRESIDENT thought such cases not rare, and believed that it was very difficult to separate taste, touch, and smell, and that there may have been in this case shock to the sympathetic centres in the neck, and so to the nerves of taste and smell.

Dr. LOCKHART CLARKE referred to a case of locomotor ataxy, in which both taste and smell were lost.

Dr. GREENHOW then read notes of a case of Progressive Muscular Atrophy.

Dr. BAEUMLER communicated a case of Enteritis, illustrating the dangerous effects which in cases of this kind may follow the use of the mildest purgative even after all acute symptoms have subsided. The patient, a young man aged twenty-two, was taken ill, after some irregularity of diet, with symptoms threatening peritonitis. There was great pain in, and extreme tenderness of, the abdomen, with some distension, besides high pyrexia. With rest and opium these symptoms subsided in a few days; and on the sixth day of illness a furred state of the tongue, slight tenderness in the cæcal region, and constipation, were the only abnormal symptoms remaining; pulse and temperature being quite normal, and the appetite returning. On the following day, the bowels not having acted for five days, and the descending colon being filled with solid fæces, half an ounce of castor oil was given. No sooner had this commenced acting than all the previous symptoms returned, the temperature again exceeding 102° Fahr., and the patient for some days being in a somewhat critical state. Gradually, however, the symptoms subsided. On the seventh day of this relapse the pyrexia declined, and the bowels, which had not been open since the action of the castor oil, moved spontaneously. From that day the recovery was uninterrupted.

Reviews and Notices of Books.

The American Journal of Syphilography and Dermatology. Edited by M. H. HENRY, M.D., &c. Published quarterly. 8vo. New York: F. W. Christern.—We now fulfil an intention which we have had for some time past of directing the special attention of our readers to this excellent journal, the numbers of which have for the last two years appeared under the editorship of Dr. Henry, of New York. The subject of dermatology seems to have greatly fascinated the rising generation of American physicians, if we may judge by the large number who are to be found visiting the schools of Vienna, London, and other places, with a view to acquaint themselves with the practice of foreign dermatologists. The promoters of the *American Journal of Syphilography and Dermatology* did wisely in giving their journal to the world, and thus affording in the first place a convenient platform especially for American dermatologists and syphilographers to meet and ventilate their various opinions; and, in the second place, a convenient locale for the storehouse of valuable facts. The contents of the journal consist of original articles, which have always been excellent, clinical contributions, reviews, therapeutical notes, and an epitome of current literature. In selecting articles from foreign journals the Editor has published *in extenso* only contributions from the first authorities. The Americans have a great power of sifting out the useful and the practical from the mass of merely theoretical and speculative matter, and this faculty seems to have been specially exercised in the serial under review. As an instance of the kind of article which the practitioner will find in the journal we may instance that which appears from the pen of Dr. Henry in the last (April, 1872) number now before us. It is a *résumé* of the treatment of venereal diseases as pursued in the Vienna Hospital under the direction of Prof. von Sigismund, and it includes all the formulæ used by that distinguished man in his practice. Speaking of the work from a knowledge of the nine or ten numbers which have already appeared, we cannot refrain from congratulating the profession in America on the possession of so good a journal devoted to cutaneous medicine. It is a work, moreover, of particular value to the English practitioner who may care to keep himself *au courant* with the progress of dermatology, and it may conveniently supply the place of an English work of the kind. To those who are studying the subject of dermatology in England we particularly commend the *American Journal of Syphilography and Dermatology.*

Monograph of the British Graptolitidæ. By H. ALLEYNE NICHOLSON, M.D. Part I. pp. 133. Blackwood and Sons. 1872.—This interesting group of fossils, widely distributed though the Silurian rocks, and just mentioned by Linnæus, received but little attention till the third decade of the present century. During the last forty years, however, many papers and notices have appeared, the most important being Prof. James Hall's monograph "On the Graptolites of the Quebec Series of North America," published in 1865, and the memoirs of Barrande, McCoy, Harkness, Suess, and Geinitz. No one, however, could be better qualified than

Dr. Nicholson to write a monograph upon them, since he has himself discovered and named many new species, and has ascertained their presence in various new localities. Formerly regarded as Orthoceratites—i.e., a family of Cephalopods, they have been successively considered to belong to the Pennatulidæ, to the Foraminifera, the Polyzoa, and to the Hydroid polypes, the latter view being generally accepted. Dr. Nicholson himself holds that their true affinities are with the Hydrozoa rather than with the Polyzoa, though certain points of resemblance to the latter have been noticed. The Graptolites present many varieties of form, but, speaking broadly, they resemble the Sertulariadæ in having an axis, usually simple, but sometimes branched, with a series of cells arranged on one or both sides of it, giving it a serrate appearance. The several parts of the polypary, as the solid axis, the common canal, the individual cellules of the base as well as the surface markings, are all fully described, both in their general and special bearings. The rest of the present part is occupied with the consideration of the reproduction and development of the graptolites, their zoological position, geological distribution, and a general description of the various genera. The work is excellently illustrated, having at least one and often several drawings of each genus, and there is a good historical introduction.

Notes on England. By H. TAINE, D.C.L. Oxon., &c. Translated, with an introductory chapter, by W. F. RAE. Strahan and Co. 1872.—By this time the fame of M. Taine's Notes on England must have become familiar to our readers. To see ourselves as others see us is the lot of the few; and the reader will find tolerably accurate judgment passed upon him, his doings, and his country, by the distinguished man from whose pen these notes emanated. M. Taine's work has an especial interest for the profession, and particularly the chapters on English Marriages and Married Women, English Households, Life at Universities, Schoolboys and School Life, Ragged Schools, Hospitals, Workhouses, Volunteers, and others. The articles, as is well known, first appeared in the Paris *Temps*, and were afterwards, in part, translated into the *Daily News*. The translator of the present work, Mr. Rae, has given a capital introductory chapter, embracing an account of M. Taine's life and acquirements, which adds greatly to the value of the notes, which we commend very warmly to the reading part of the profession.

Dell 'Ultima Malat'ia di Giuseppe Mazzini, avvenuta in Pisa nel Marzo, 1872. Narrazione del Dottor GIOVANNI ROSSINI. Pisa: Dalla Tipografia Nistri. 1872. (On the last illness of Joseph Mazzini, &c.)—The late well-known agitator had repaired secretly from Switzerland last February to Pisa, where Mr. Rosselli gave him hospitality. He was there taken ill, and Mr. Rosselli sent for his usual medical man, Dr. Rossini, to attend upon his guest, who passed as an Englishman of the name of John Brown. The ailment then consisted of severe irritability of stomach, which was soon relieved by appropriate means. The attendance then ceased; but Dr. Rossini was recalled in about a fortnight (March 7th), when the patient was evidently suffering from a low type of pneumonia, which, in a man of seventy, who had undergone many hardships, proved fatal on the 9th of March, Professor Minati having been called in consultation. Dr. Rossini, in this pamphlet, professes great respect and admiration for his patient, whose real name was for some time withheld from him, and has undertaken to describe Mazzini's last illness. In doing so the author has indulged in actual dissertations on the nature and treatment of the affections he had to treat, quoting authors at great length, and surcharging, what ought to have been an unpretending pamphlet, with citations from Hippocrates down to Hughes Bennett. We give, however, the author full credit for his devotion to his patient, and have been very glad to learn the particulars of the last illness of a consistent and persevering popular leader.

Bowers's Memoranda on Difficult Subjects in Anatomy, Surgery, and Physiology. Forming a Pocket Companion for the Young Surgeon, or for Students preparing for Examination. Fourth Edition. Royal 32mo, pp. 309. Renshaw. — This little book will be remembered by many a hard-working member of our profession as an old and useful friend. It now appears corrected and enlarged, and will be found not only to afford great assistance to those who are about to present themselves for examination, but also a refresher to the surgeon on points of anatomy, surgery, and physiology on which he has become rusty. Its convenient size and binding enable it to be carried in the pocket with comfort; whilst the print and paper are good. But, most important of all, the matter is concise, to the point, and trustworthy. We can heartily recommend the student to buy it.

Botany for Beginners: an Introduction to the Study of Plants. By MAXWELL T. MASTERS, M.D., F.R.S. London: Bradbury, Evans, and Co. 1872.—This is an excellent and agreeably written little work, the substance of which has already appeared in the *Gardener's Chronicle*. The illustrations selected are all of them easily procured in gardens or fields, and the beginner in botany can scarcely fail of becoming interested in the science; for the arrangement is good, and the information is conveyed in an easy, pleasant way. The woodcuts, moreover, are plentiful and well executed.

PRIVY COUNCIL REPORTS.

HUDDERSFIELD.

DR. BUCHANAN has paid a visit of inspection to Huddersfield, where enteric fever was extremely prevalent in the autumn. He reports the public water-supply good but insufficient, and many wells are in use which exhibit sewage contamination. Measures have been taken to obviate this defect. This, however, will be of little use until every house (except a few that are remote) is compelled to take the public supply. The chief cause of the fever was the general want of proper sanitary administration. There is no medical officer of health, and although the inspector of nuisances is an able and conscientious officer, he has not been able to recognise, interpret, and advise upon a number of local sanitary defects. Moreover, the inspector has already more than he can do; indeed it is obvious that one inspector for an area of 11,000 acres and 70,000 people is utterly insufficient. Great reforms are required in the ventilation of the sewers, the isolation of house drains, the removal of excrement, the construction of houses, the closure of cellars, and in the provision of a disinfecting apparatus, a hospital, and a mortuary.

BOLTON.

Dr. Ballard's report on Bolton ought to be in the hands of every member of Parliament. It is, in fact, impossible to present a more deplorable picture of filth, overcrowding, and most scandalous sanitary neglect. The infantile mortality is frightful. Numbers die without having been once seen by a medical man, and no inquests are held, although there is abundant evidence of frequent criminal neglect. It is not uncommon for women to lose all their children from systematic slow starvation.

Bolton is noted for its grand Town Hall, its system of sewerage, and other grand public works, but Dr. Ballard says that there is almost complete neglect of the laws relating to the public health. The machinery is dwarfed and insufficient. Until lately there was only one nuisance inspector. A gentleman was dignified with the name of medical officer of health without any salary, and his services for two years were estimated at the sum of ten guineas. The registrars gave the usual birth and death returns, but they were sent to

the inspector of nuisances, who selected therefrom subjects of official investigation. This officer keeps no complaint-book, but does what and as he likes. The 35th section of the Sanitary Act, 1866, was adopted, but nothing really done to diminish overcrowding. There is a disinfecting apparatus, and no one competent to give directions for its use. No hospital, no mortuary; in fact "there is no thoroughness whatever. The work required to keep the town clean is either only half done or not done at all."

This report points to the fact that mere legislation is not likely to secure good sanitary administration. What is really required is more inspection, with the permanent employment of a better staff. It will be perfectly useless to insist upon the appointment of a medical officer of health if he is to be treated as he has been at Bolton.

The districts surrounding Bolton are in an equally deplorable condition. Local boards, professing to regulate the building and drainage of houses, have most scandalously neglected their duties. In some districts the neglect and filth were so great that Dr. Ballard says he could not suspect the existence of any sanitary authority whatever; whilst elsewhere relieving officers were the only inspectors of nuisances. Dr. Ballard says that nothing of his London experience equalled what he saw in and around Bolton.

The vestries and boards of guardians are most of all to blame. Dr. Ballard believes that they could not have known what their duties were, or that the Legislature had conferred upon them sufficient powers to execute their duties. And he states truly, that such scandalous neglect serves to bring disgrace on local government. It appears to us that these reports would be laid upon the table of the House with great advantage.

An Address
ON
ENGLISH RECOLLECTIONS OF A GERMAN SURGEON.

Delivered at St. Thomas's Hospital, May 23rd, 1872.

BY DR. L. STROMEYER,
OF HANOVER.

GENTLEMEN,—I suppose I may leave it to the kind care of my youngest English friend, Mr. William Mac Cormac, to account for the liberty I take in addressing you. Let me ask your indulgence for spoiling the Queen's English, which is not my native language. This is the first time that I speak to an English audience. As a surgeon, I dare say, I am not quite a foreigner, having got a sprinkling of English surgery even by inheritance. My father, who was a member of the Royal Medico-Chirurgical Society in London, and well known in his time by having introduced vaccination in Germany, was a regular pupil of St. Thomas's Hospital from 1792 to 1793, under Mr. Cline, at a time when Sir Astley Cooper was a demonstrator of anatomy there. He had a very high opinion of English surgery, and used to say that the best surgeons in the universe were to be found in London; that during a twelvemonth's presence there he witnessed only a very few cases in which his opinion was different about the propriety of the operations which he daily saw performed. He was able to judge for himself, being already thirty years old when in London, and having been a pupil and assistant of Professor Richter in Göttingen. I followed my father's example, and have been a pupil myself at St. Thomas's Hospital in 1827 and 1828. Mr. Henry Green introduced me there, and made me acquainted with the splendid circle of surgeons then living in London: Benjamin Travers and John Tyrrell, of St. Thomas's Hospital; Bransby Cooper, Aston Key, and Mr. Morgan, of Guy's Hospital; William Lawrence and Henry Erle, of St. Bartholomew's Hospital; Sir Benjamin Brodie and Mr. Rose, of St. George's Hospital; Sir Charles Bell, of Middlesex Hospital; Mr. Guthrie, of Westminster Hospital; Mr. Wardrop, of Westminster Eye Infirmary. Sir Astley Cooper had already retired to the country. I have only seen him on an occasional visit to St. Thomas's Hospital, where he used to come from time to time when he was tired, as he said, to look after the ewes. It was highly gratifying to see how his presence used to be hailed. The same scene took place when old John Abernethy appeared in St. Bartholomew's Hospital. The students flocked around him, and he generally gave them a speech, in parting, in the open court of the hospital, ending by quoting Shakespeare. Being very partial myself to the great poet, I liked these quotations, which reminded me of Sydenham recommending to read "Don Quixote." For a surgeon, nothing is so injurious as dulness; he must always be in good spirits when his services are required. Sir Astley Cooper used to say that a surgeon ought not to read too much; but this, I suppose, meant dull authors, not Shakespeare or Cervantes, who are, both of them, very accurate observers of human nature, like Dickens, Sterne, and Fielding, whose "Tom Jones," I dare say, you may happen to know.

I could speak for hours if I were to say what influence the surgeons in London whom I have named have had on my mental development. First of all, I admired the truly noble character of the profession, the good feeling of its masters to each other, their candour, their humanity in the treatment of severe cases. I can only repeat what my father said fifty years ago—the operations which I saw were, all of them, necessary, well planned, and, in most cases, executed with great dexterity. Manual dexterity was considered as a quality which scarcely deserved to be mentioned, it was only spoken of where it shone by its absence in a bungling operator. Every operation was executed with the sole view to save the patient's life or to diminish his sufferings, not to show the dexterity of a virtuoso. Circular amputation was preferred to the more showy flap amputation. This I had not forgotten when I had some influence in recommending the circular amputation in times of war, where it is of greater importance still than in chronic cases of civil practice. In 1827 I examined the invalids in Greenwich Hospital, on whom amputation had been performed by the flap method, and found that the fleshy cushion had disappeared entirely. Besides this, I admired English surgery for the simplicity of its application. The great conformity of principles resulting from simplicity struck me as highly valuable, because it makes a deep impression on the mind of a younger member. This conformity gives English surgery a national character. It is not the same in other countries, where only your very particular friends admit that you are right in saying that two and two make four, or that a severe gunshot fracture of the knee-joint requires amputation.

I was well satisfied with the great caution of English surgeons in adopting innovations. I saw no resections then, and there was no trace of lithotripsy yet. It is better to begin slowly, and then to go on steadily. This is otherwise in Germany and in France, where surgeons are fond of novelties. At present, you may witness the effect of greater caution. Sir Henry Thompson has eclipsed the inventor of lithotripsy, Civiale himself, whose instruments, indeed, were not worth trying till Heurteloup had found the right ones for him. Sir William Fergusson, by his articular resections, has surpassed most continental surgeons; Mr. Spencer Wells, in ovariotomy, all living surgeons.

From what I had observed in London, I came to the conclusion that the beneficial influence of surgery and the high standing of the profession depend chiefly (1) on the good feeling of its members towards their patients and towards each other, not excluding those of a former time; (2) on simplicity; (3) on a total abnegation of selfishness in planning and executing surgical operations.

You may ask me, gentlemen, why I could not have learned that just as well in Germany. There is no place there which can boast of such a number of great surgeons at the same time. Our greatest capitals have but a few surgeons of eminence in comparison. Whatever may be their merit, their example is not so striking as that of a whole body acting out the same principles. In Paris the number of surgeons is greater than in our German universities of Berlin or Vienna, but not to be compared to London, which I consider is a central point of surgery for the whole globe. This, gentlemen, you may consider as the sincere opinion of a man who has watched the progress of surgery during half a century. I wish it may remain so for centuries.

After having been in London, I happened to be in Paris at a time when Lisfranc was thundering against Dupuytren, whom he used to call "le barbare de la Seine," as a sample of good feeling amongst the profession there. It is one of the great advantages of travelling, and of seeing eminent men of other countries that, by observing them in their activity, one may acquire a better notion of their character. Their writings excite greater interest, because we are inclined to give them greater credit. I always admired the simplicity of style in English authors in general, and of surgical writers in particular. Sterne ridicules the pompous style by mentioning the expression of his French barber about the solidity of a new wig: "You may immerse it into the ocean." An Englishman, says Sterne, would have preferred a pail of water. To avoid the barber's style, I took precious good care never to say ocean when I meant a pail of water.

After sketching these general impressions, permit me, gentlemen, to give a few particulars of the manner in which some of my English teachers have influenced me. Having so lately seen one of the greatest battle-fields of modern history, that of Sedan, where I met Mr. William Mac Cormac, who, from over-exertion, did not look quite so well as to-day, and the siege of Paris afterwards, let me speak of Mr. Guthrie first. I cannot say that I liked him personally quite so well as many of the others; but I admired his energy in maintaining the great principles acquired in the Peninsular war, the necessity of early primary operations, of tying a wounded artery, if possible, on the wounded spot itself. I have done all in my power to keep his doctrines, those of the admirable Hennen, and of old Baron Larrey, in fresh memory since 1848, when the time seemed to approach that Germany must go to war for its own development. For a man of sense, there can be no doubt about the necessity of early primary operations, but in military practice there are difficulties in which it is the duty of every medical man to maintain the sacred cause of humanity. This sentiment was appreciated even by a conqueror like Napoleon I., who said of Larrey that he was the most virtuous man he had ever known. It was one of Mr. Guthrie's best qualities that he always gave very positive reasons for what he did; so another person could easily find out whether his own views must be in accordance with Mr. Guthrie's opinions. There was no fickleness about him. I differed from him in one essential point—that of his preferring amputation for gunshot fractured thigh to conservative treatment. Guthrie puts too much stress upon the imperfections of conservative treatment, the result of which is often a very disabled limb, whose possession does not make the patient very comfortable. But these imperfections admit of improvement, while a high amputation gives no prospect of better chances; it will always remain a very dangerous operation. Our first object is to save a man's life, and the second to make him comfortable, but not in his grave. My results of conservative treatment in gunshot fractured thigh, during the first three campaigns of 1849, 1850, and 1866, did not go beyond 50 per cent. healed. I saw the reasons of our failures, tried to avoid them, and went on with conservative treatment. In the two campaigns of Schleswig-Holstein (1849 and 1850) the patients had to be carried to considerable distances. After the battle of Lanzensolza, in 1866, I was unable to prevent many cases from being spoiled by an injudicious use of plaster-bandages. It was in Floing, near Sedan, where we succeeded in saving 77 per cent., 27 amongst 35 patients, who had been carried to no great distance, and were treated without putting much restraint on their shattered limbs.

From my own father I had learned the advantages of Percival Pott's position, which may be employed during the first period in most cases; in others or later the double inclined plane, or a straight wire basket, will suffice. According to my opinion, the great principles to be followed in compound fractures in general are—(1) dressing the wounds without lifting the limb; (2) avoiding constriction; and (3) not irritating the muscles in straining them by mechanical contrivances. A gunshot fractured thigh permits a weight to be suspended to it, keeping the limb a little at rest, like the hand of an assistant, but not an extension by weight or other contrivance, which gives the limb its proper length, except in very few cases, as that mentioned by Mr. Mac Cormac in his "Notes and Recollections," which healed without difficulties and without any perceptible shortening. The most common case is, that for some time after the accident the muscles retain a tendency to retract, which is increased by opposition, and ceases by and by in a favourable position of the broken limb. The idea of subduing muscular action by constant extension, even in compound fractures, is not new; but it had not been tried before by contrivances so dangerous as a plaster of Paris bandage. This is applied under chloroform, which relaxes the muscles; the limb is made straight, and as long as its fellow. When the action of chloroform has ceased, the muscles recover their activity, and are kept in extension in spite of their violent efforts to contract, which often break the plaster bandage. The tension, which is kept up by mechanical means, makes the sensibility rise to a high pitch, and severe inflammation follows. If the plaster bandage be loosely applied, by putting wadding and a flannel roller between, it is o ten well borne, but the limb is as short afterwards as if no bandage had been employed. While I was writing this in Hanover, on the 1st May, a young captain came to me, from whose gait it was not to be expected that he had had a gunshot fractured thigh in 1870. A plaster bandage had been employed on the third day; he could not bear it. The surgeon, who took it off next day, told him that the fragments had taken a bad position under the bandage. From this time he was treated without restraint, and cured in six weeks, his limb lying in a wire basket. The shortening was one inch of his left lower extremity. His brother met with the same accident at the same time, but was healed with a shortening of five inches. Large splinters came away by suppuration, some of them being about three inches long. The captain came to consult me about his brother. He is in service again long ago.

The danger of early plaster bandages on other parts of the skeleton is less than in the thigh; but it exists and is very great in the humerus, for here pressure is very liable to stop the venous current, or to drive a splinter of bone into the brachial artery. I treat these fractures by letting the arm lean on a soft cushion, which is tied to the thorax, the forearm being suspended in a sling. In Schleswig-Holstein I had twenty-four successful cases amongst twenty-nine. One of the German surgeons who took part in the late war —Dr. Rapprecht, of Munich—prefers the plaster bandage; but amongst the three cases which he had to treat there was one which proved fatal on the seventeenth day, by hæmorrhage, a splinter of bone having opened the brachial artery.

I differ from Mr. Guthrie besides in his appreciation of trephining the skull, which I have tried to exclude entirely in military practice as useless in some and unnecessary in other cases. I consider a state of coma from depressed skull no more as an indication for applying the trepan than a comatose state in typhus as an indication to rouse the patient from it by any other means but those which are in accordance with his general state—cold, for instance, but not stimulants. As soon as the fragments of the skull become detached by suppuration, the comatose state ceases by itself.

The great difficulty in settling this skull-question consists therein that some patients survive the use of the trepan, or of an early extraction of splinters, and that some recover their senses very soon after the operation. This seems to be a conclusive proof of the legitimacy of active interference. But there is no depending upon it; the patient may die just as well after having recovered his senses completely, and, as experience has shown, more easily than if you let him continue comatose by not disturbing the splinters. This might have been expected, from very solid physiological reasons. By taking away the splinters at an early period in cases where the dura mater is wounded, you open the arachnoid cavity; air and acrid matter can enter it. Brain-substance, when bruised, thus becomes putrid, while it might have been eliminated by reabsorption, without access of air. Subcutaneous operations practised in modern times have done a great deal to put more stress on excluding air; but even before their time, Dease and Sir Benjamin Brodie came to a conclusion that access of air was to be avoided in cases of fractured skull, and that no interference ought to take place for depression unless it is warranted by cerebral symptoms. John Hunter had not arrived at this degree of caution when he said in his Lectures (Palmer's edition, vol. i., p. 493) "All fractures of the skull may be called compound, for, if not so naturally, they are made so by the removal of the scalp."

In the retrograde tendency of surgical interference with a broken skull it was an important step not to remove the scalp; but other steps were to be argued. An open scalp-wound over a broken skull does not produce a great change in the danger of the case. Spreading inflammation of the membranes of the brain or deep-seated suppuration does not necessarily follow from it; but these are very likely to take place if you open the arachnoid cavity by removing the splinters which have kept it closed. When the splinters come away by a very limited suppuration at a later period, the arachnoid cavity is closed by adhesions of dura mater to the brain. It is often impossible to say beforehand whether the dura mater has been opened or not. If it is open, the danger is rendered much greater by removing the splinters. The London *Medical Times* of 1860 contains a list of eighty-three cases in which the trepan had been used, fifty-one of whom died, and thirty-two recovered. Amongst those who did well, the dura mater had been wounded; but in three cases the others as well were such that, according to my experience, they might have recovered without using the trepan or early extraction of splinters. Gunshot fractures of the skull are always compound; their successful treatment without active interference deprives this of one of its strongholds—the presence of an open wound, which formerly seemed to permit further violence. During the two Schleswig-Holstein campaigns of 1849 and 1850, I had to treat forty cases of gunshot fractured skull, thirty-three of whom recovered and seven died. We had one case of trephining with happy result, but it was of that description that it might have done well without interference. The others were subjected to an antiphlogistic treatment by ice, bleeding, purgative medicines, and low diet. The splinters were not removed before being quite loose. I have been blamed by M. Pirogoff and others for totally excluding active local interference in gunshot skull fractures; many others have followed my example. You will admit, gentlemen, that there is no knowing of what use a thing may be before having tried it. My object was to know how far we might get without active interference. The result was not unsatisfactory. It was the same thing with treating typhus patients without stimulants. By trying it, on physiological principles derived from morbid anatomy, I found it eminently successful. What has pleased me most, from a medical point of view, during the late war, was to find two hospitals in Rheims and one in Versailles where the number of deaths from typhus was not above eight per cent. Weak broth and some ounces of very sour wine were all the stimulants employed till the fever was over. The wine which I tasted was so sour that it must have contained more acid than common vinegar, as I know from comparative experiments with potash. So it probably did the same service as phosphoric acid, which I prefer, with well-boiled water-gruel for diet during the febrile stage. The two hospitals in Rheims were close to each other; in one the patients were cooled by immersion—in the other by active ventilation in tents, while the results were quite the same in both. In other hospitals, the mortality from typhus amounted to 25, even to 50 per cent. Nothing shows the great value of the medical art and science better than such striking differences in the results of treatment, under the same circumstances in regard to constitution, causes, and symptoms.

During great part of my presence in London, I used to see the surgical patients at St. Bartholomew's Hospital, under the care of the clever and highly accomplished surgeon, Mr. W. Lawrence, whose kindness and very instructive conversation I shall never forget. I saw a great number of patients under him with phlegmonous inflammation, who were treated by incisions at an early stage, before suppuration had set in. This bold practice was, at that time, little known in Germany, where it was spread afterwards, and is generally employed up to this day. Cases of this description do not permit hesitation, and show the use of the treatment very evidently. The effect of an antiphlogistic treatment is not so striking in many other cases. It is only by a longer experience that a surgeon is enabled to say whether a case of fractured skull, or a compound fracture of a limb, has been greatly benefited by a venesection which has been made, not in a late period, when suppuration is forming, but early, when reaction is taking place, when the face becomes flushed and the pulse full and hard. Amongst the many wise things which Sir Astley Cooper has said, was the advice to visit a patient with a broken skull three times a day, in order to find the proper time for bleeding him. This does not produce a similar effect like an incision in phlegmonous inflammation; it does not restore the patient's consciousness, but it keeps him alive. That this really takes place can only be judged from other cases, in which bleeding at a proper time has been omitted. But bleeding is out of fashion now in Germany as well as elsewhere. The discovery that pneumonia can be cured without bleeding has been the first cause of this antipathy. I have treated pneumonia myself without bleeding, and had very good results. I lost but 5 patients out of 558 during ten years in the general military hospital of Hanover, from 1853 to 1864. Our patients were cupped once and took phosphoric acid. I never allowed this to be a proof that venesection was equally unnecessary in surgical cases, which have no typical course like pneumonia. It was a mistake of former times that pneumonia might be subdued by repeated bleeding; it runs its course in spite of that. I have tried in vain to maintain its use in surgical practice: there is no swimming right across a mighty stream; one must wait for the proper time of low water to cross it. It must be some years ago that Mr. Syme said bleeding-lancets were to be found in Great Britain no more. This, I suspect, has been the acme of antipathy to bleeding. From that moment it was no more a distinction not to bleed. Bleeding ventures to show its head again in the medical journals rather timidly, which now record cases that would have been fatal without venesection. Lancets can be easily supplied again, and a few cabbage-leaves, as Dickens says, will be sufficient to give a little practice before opening a vein in man. Perhaps I am mistaken in my expectation that bleeding will soon have its turn again. Perhaps I shall be damned in a future time for having been the last of the Mohicans recommending venesection. At all events, I would in that case meet very good company, all my old friends in London.

On the 6th of July, 1827, I witnessed the first case of hæmorrhage, from thrombosed vein, in St. Thomas's Hospital, under Mr. Tyrrell's care. A shoemaker had been stabbed by his own wife with an awl in the right upper arm. The wound appeared trifling to him; he did not notice it for some days; then an immense swelling of the upper arm took place; the forearm became gangrenous. Mr. Tyrrell amputated close to the axilla. In examining the separated limb, it was found that the brachial vein had been freely opened by the instrument, that a large hole, filled with coagulated blood, had formed near the vessels; the brachial vein was thrombosed to a considerable extent above the puncture. It struck me that the internal bleeding must have taken place after the obstruction of the brachial vein, and that gangrene had been produced by stagnation. I remembered this case many years later, when I found, in military practice, that secondary hæmorrhages in open wounds take place from similar causes. I described them under the name of phlebostatic hæmorrhages. Others prefer to call them pyæmic, putting little stress upon the venous obstruction. But pyæmia does not always exist in these cases, and the influence of venous obstruction on hæmorrhage is evident. You will see this if you should happen to bleed again, which must be done by stopping the venous current above the place where you open the vein. Every open wound would bleed under a similar contrivance. Let me observe here, what I have forgotten to mention elsewhere, that capillary thrombosis of some extent below an injured vessel must have the same effect as thrombosis of the main vein, because it increases the degree of pressure which the column of blood exerts in entering the limb. The quality of the blood in it must become altered by impediments of either kind, and healthy nutrition cannot be kept up.

These observations are of great interest in military surgery; they teach us to be very cautious in treating wounds which may have affected vessels of considerable size, whose bleeding has been arrested by bruising or coagula. The injured vessels may heal without hæmorrhage, if the reflux of venous blood remain free; but if there be any obstruction, either by capillary or venous thrombosis, secondary hæmorrhage can occur. Before this takes place the wound often changes its aspect from altered nutrition. Mr. Guthrie's plan of tying a wounded artery on the

spot often does very well in minor vessels, but it often fails in the femoral artery. The large vein accompanying it has often been torn or bruised by the same ball. After tying the artery on the spot, the vein often becomes totally impermeable, and then hæmorrhage recurs, or the limb becomes gangrenous. It may be proper in some cases to gain time by putting a ligature above the wounded spot; before new hæmorrhage occurs the vein may have undergone a favourable change. In other cases it is better to amputate at once.

I cannot dismiss Mr. Tyrrell's name here without mentioning how I used to admire his cataract operations. He did them generally by a superior corneal incision of the greatest regularity. I adopted his method of sitting behind the patient's head in operating on the right eye. I had seen Graefe the elder in Berlin, Jaeger the elder in Vienna, and Roux in Paris, perform extraction, as well with the left as with the right hand, but I preferred the more cautious English way. I often thought of Tyrrell's beautiful operations and their results when the time came that iridectomy seemed necessary for the great majority of cataracts before extracting them. I have hailed Dr. Liebreich's innovation as a candid acknowledgment that modern oculists had gone too far in this respect, and that the iris ought to be spared if possible or reasonable.

To Sir Benjamin Brodie I feel very thankful to this day, for what I have seen of him in treating diseases of the urinary organs, but chiefly for his skill in diseased joints. He was the first surgeon who enjoined the doctrine of keeping diseased joints at rest by putting them on a splint. The leather splints, which he recommended, had been partly superseded by starch or plaster bandages, but I use the leather splints constantly in many chronic cases, when the patient is to go out to bathe, or to use other local applications. Sir Benjamin Brodie's influence on the treatment of articular diseases has been great in Germany. His work on the subject was translated, in 1821, by Dr. Holscher of Hanover. It had to fight its way in Germany against Rost's authority, who had introduced the red-hot iron as a general remedy for most chronic cases. It is used no more now. The great principle which Mr. Hilton has so ably advocated, of keeping diseased parts at rest, either by mechanical or by physiological means, has done away with the red-hot iron. It was Sir Benjamin Brodie's farther merit to point out cases where articular disease is spurious, and where rest proves hurtful. I consider Brodie's work on local nervous affections, published in 1837, as one of the greatest value, on account of the number of persons who may be benefited by his doctrines. I have given a short extract of it in my "Manual of Surgery," but this had no great effect in rousing the public attention. My German countrymen imagined that local nervous affections were a particular gift of nature to English young ladies. Not a month passes but I see a striking case in Hanover. My son-in-law, Professor Esmarch, who travels a great deal during his vacations, has been able to pick out a number of cases in different parts of Germany, and to extricate them from the spider's web of injudicious treatment. Perhaps I ought to have written myself about this subject more at large, but I despaired of doing it better than Sir Benjamin Brodie. Professor Esmarch has published a small volume last year on "Articular Neurosis," which, I hope, will go far in spreading Sir Benjamin Brodie's doctrines, whose German translation had failed to produce the desired effect.

This subject is intimately connected with the exertions of that great genius whose discovery of the different roots of motor and sensitive nerves has shed lustre on our century. Perhaps no man has given to his contemporaries so much to think about as Sir Charles Bell. He did not live long enough to witness the wide expanse of studies derived from so simple a source as that of the different roots. Bell's researches on paralysis of the joint-nerve alone were sufficient to create a number of similar ones. The connexion of this illness with rheumatism, the liability which persons have to it who are subject to abdominal affections, or to impediments in the circulation of the abdominal viscera, pointed to other diseases with diminished nervous energy, in the organs of sight and of hearing, for instance.

In following the hints given by Charles Bell, I found that every local affection originating from violence or spontaneous inflammation was influenced in its course by an enlarged liver or spleen, and that, for a cure, it is necessary to reduce their size. This accounts for the very general but more empirical use of blue pill and bark, and advises us to examine the size of the liver and spleen by percussion, especially in chronic cases, which show very little tendency to heal, in secondary or tertiary syphilis, for instance.

Marshall Hall's discovery of the reflex function gave a new stimulus to thought on the great importance of Bell's discovery, from which it had taken its origin. This doctrine of the reflex action of the nervous system can only be compared to the discovery of the blood circulation. It gave an idea of the manner in which the nervous action is kept on day and night, and reflex action following the other. Trying to understand this action, I was led to assume a second principle, which is intimately blended with reflex action. I found that immoderate reflex action in muscles, or muscular organs, was generally combined with painful feelings, sometimes in the neighbourhood, sometimes remote from the seat of spasm. As a similar train of combined sensations must take place during healthy action of muscles or muscular organs, I guessed that the action of the muscular system was necessary to maintain the nervous energy.

Sir Benjamin Brodie, in his work on local nervous affections, opposes the popular use of the name of spasm for painful feelings. This is the case in Germany. People make no difference between *Krampfe*, spasm, croup, and *Schmerz*, pain. There is some reason for it; where there is spasm there used to be pain, but often in remote parts. Instead of pain, spasm is often combined with altered sensibility, partial or general. The German name for hysteria is *Mutterkrampfe*, mother cramps. The uterus being a muscular organ, it may well be that hysteria partially consists of habitual spasm of the uterus, as a reflex action from the ovaries, or from other parts of the system. This idea was well known in England in former times. You can find it in Shakespeare's *King Lear*, who is made to say, "How this mother swells up towards my heart."

One of the most striking examples of pain originating in spasm is that of the glans penis, from contractions of the bladder around a stone in it. Another well-known example is pain in the knee arising from reflex spasm of the flexor muscles of the hip-joint from inflammation of its bones, sometimes from other causes.

In a particular case, where there was no inflamed hip-joint, I succeeded in doing away with the knee-pain by dividing the rectus and pectineus muscles. I have pointed out sensations, combined with muscular action, in all the organs of sense and in many cases of disease. I have written on my theory of combined motor and sensitive nervous energy, first, in Hanover, 1837, in the *Göttinger Gelehrten Anzeigen*, an article which I reproduced in Latin, after having become professor of surgery in Erlangen. I have followed up this subject no farther, because it would have cost me the exertion of a whole life to carry it to a degree of perfection equivalent to a clear demonstration by physical evidence. But the fact that every pain, which evidently does not depend upon local alteration of texture, depends on spasmodic action of some muscular organ, has been of great use to me in practice, and I can advise you to put this question to yourself in every case of that description, Where is the seat of spasm? Remember that it is as well in the voluntary muscles as in the involuntary ones that spasm can take place. Perhaps you little suspect that the liver is an organ whose muscular energy is of great importance. But if you had felt the pain consequent on passing a biliary calculus you would think otherwise. I have felt it myself, and took six grains of opium in one night for it.

Pains in remote parts of the body are very frequent in liver complaints, in the shoulder, in the head, or in other parts. I could cite a great number of cases in which local nervous affection of an extremity proceeded from the liver, others from the accumulation of hard fæces in the large intestines, keeping up spastic action for their expulsion. It is very easy to cure them, after having found the real cause, without any topical application whatever to the affected limb. After having spoken of such a variety of things and for such a length of time already, let me bid you farewell now, gentlemen, and thank you heartily for the kind attention with which you have been listening to me. I wish you may remember your studies in London with the same feelings of gratitude and satisfaction as I do after forty-four years of practical life.

THE LANCET.

LONDON: SATURDAY, MAY 25, 1872.

MR. LOWE is a man of tolerably consistent individuality, and if the subject of Conjoint Examinations were to be mooted in the Cabinet we can imagine that he would speak on it very much in the same way as he spoke at the University of London. It is to be gathered from his speech that the Government regards the scheme of the English examining bodies seriously, and is prepared to give it a favourable consideration and a fair trial before taking the matter of constructing a board in a simple way and without reference to the individual bodies into its own hands. Mr. LOWE spoke of the competition among the examining bodies in consequence of their being so numerous; and, while expressing approval of any multiplication of teaching bodies and a healthy rivalry among them, maintained that there should be but one examining body, in order to secure that the teaching always and everywhere should be of the best possible quality. This must be taken to refer only or chiefly to a licensing examining body; for Mr. LOWE would not be likely to argue that candidates for the higher degrees—degrees implying higher knowledge than is required merely to obtain a licence to practise—should show exactly the same attainment. It would be unreasonable to say that all the universities should have exactly the same standard of examination for their degrees. The standard for a licence may and should be much the same; for the object of it is to secure a minimum of knowledge, and to exclude all men who do not attain to it. But it is otherwise with degrees. They should imply some attainment more than is to be expected of the general run of practitioners, and they may properly differ in their significance. One degree may differ from another degree in glory, and yet either of them be creditable to the holder.

Mr. LOWE intimated that the Home Secretary had promised to bring in a Bill enabling the University of London to surrender its right to confer a licence to practise. It is to be hoped that this Bill will be carefully framed. It will in all probability have to be drawn, and perhaps passed, before the nature and bearings of all the conjoint schemes are fully ascertained. It would be a matter for regret if the London University should surrender the licensing virtue of its high qualifications in favour of schemes which may have to be abandoned or to be superseded. For it must be clearly understood that the schemes are still very imperfectly developed. And it is yet impossible to say what may be the working of them. Some very grave objections are obvious at once to the English and Irish schemes. Both, for example, will cost the candidate thirty guineas, which we maintain to be a most monstrous charge for a mere licence to practise, especially when the growing expensiveness of medical education and the diminishing number of entrants to the profession are considered. Then, both in England and in Ireland, there is one important body not yet included in the scheme. In England the Apothecaries' Society will still remain to give a medical diploma carrying the right of admission to the Register. And in Ireland it would seem that the Queen's University, with characteristic independence, will still act by itself, and retain its right of conferring a licence and admitting to the Register. At present these bodies, in England and Ireland respectively, examine and license large numbers of practitioners. The cost of their qualifications is very moderate. That of the Apothecaries' licence is six guineas, and that of the Queen's University is £5. The latter qualification, not only being cheap and admitting to the Register, but also carrying the degree of M.D., is naturally in great demand in Ireland. It requires little use of the imagination to understand that, when the choice of students comes to be between paying thirty guineas for a common licence to practise and £5 for a degree in medicine entitling them to registration, competition will not have ceased.

Independently of these imperfections and faults in the present schemes, we confess to misgivings as to guarantees in them that the great interests of the public and the profession shall be more considered than the feelings and interests of the individual bodies. A week or two ago, for example, we noticed that the election of representatives of the College of Physicians would be virtually in the hands of the Council of the College; for aught we know, the examinerships under the scheme will be as entirely in the hands of the Council, and as little open to healthy competition among members of the profession fitted for them. All these schemes will be unsatisfactory if they do not result in the appointment of good examiners, and if the mode of election of examiners is not such as to ensure the selection of the fittest persons. For all these reasons it is desirable that the Bill of the Home Secretary should be so framed as to retain for the University of London the right of resuming its licensing power if the schemes appear to be unpractical or unsatisfactory; and this is, we believe, the view taken by the Senate of the University, if we may judge from a letter of Dr. CARPENTER to the Home Secretary.

WE have received from New York the particulars of a case in which death speedily followed the extraction of teeth after an ineffectual endeavour to administer nitrous oxide gas. A jury of ten persons, each of whom wrote M.D. after his name, returned an elaborate verdict commencing with the finding that the deceased "came to her death from asphyxia or apnœa, as evidenced by the symptoms manifested by the patient before death and the conditions found at the post-mortem, the asphyxia having, in our opinion, been induced by the inhalation of gas administered." This is followed by certain comments or riders concerning the mode of preparation of the gas used in the case, and concerning the qualifications of persons by whom gas is administered.

Upon such a finding, it is very possible that the case may come to be recorded as one of death from nitrous oxide; and, as the facts will by no means bear such an interpretation, it seems worth while to call attention to them in detail.

On the 20th day of March, 1872, the patient, Mrs.

O'SHAUGHNESSY, accompanied by a friend, Mrs. BIGLEY, went to the office of J. B. NEWBROUGH, dentist, West 34th Street, New York, to have seven or eight loose front teeth extracted. The following is the substance of Mr. NEWBROUGH's testimony, which was corroborated by Mrs. BIGLEY:—

"Advised the patient that the extraction in her case would be so easy that she need not take gas. She replied, 'It will kill me to have them out without gas. I never could stand it.' I procured a six-gallon bag of gas for her, and induced her to take the mouth-piece and try it. When she felt the gas coming she snatched the bag away, and said she would have her teeth out without gas. For three or four minutes we discussed the matter, and I offered to extract her teeth without gas; but at sight of the forceps she refused again. Then said she would try the gas once more. It was turned on as before, and she got one imperfect breath (as she called it) of gas, and snatched it away again. In the meantime much of the gas had escaped from the bag. After about eight minutes more, during which time Mrs. Bigley, the patient, and myself conversed about persons who had taken the gas successfully, I then procured a fresh bagful of gas, and again offered it to her. On this occasion she took two inhalations, and again snatched the bag away, saying, 'That stuff won't have any effect on me. Take it away. I'm afraid it will kill me.' She then wiped her mouth with her handkerchief, being entirely wide awake, and braced herself to have them out without gas, and I extracted them. Immediately thereafter she fainted, her head dropping over sideways. I raised her up and tried to have her spit out the blood, but she had lost all power. I at once ordered the lowering of the temperature of the room to sixty degrees; complexion healthy, but becoming rapidly livid, and finally purple. *Kept her upright, so as to determine the blood downward.* Respiration about fifteen a minute. Sent for Dr. Otis, who arrived in ten minutes; but death ensued two or three minutes after his arrival."

At the post-mortem examination there was found, according to Dr. OTIS, "no disease of the heart; *the brain perfectly exsanguinated in every part;* no fluid in the ventricles; one lung more engorged than the other, but healthy." This witness formed no opinion as to the cause of death.

Upon this testimony, however, the facts seem to admit of only one interpretation. The nitrous oxide could have had no more to do with the fatal issue, either directly or indirectly, than if it had never been brought into the room. The patient manifestly fainted from terror, doing so as soon as her state of mental tension was relaxed by the operation being completed. Her syncope was just a result of the reaction of an overstrung nervous system; and, if Mr. Newbrough had only laid her flat on the floor, she would probably have recovered in five minutes, have paid him his fee, and have walked away from West 34th Street as well as she entered it. It was the unwisely holding her upright that determined the fatal issue; and although one must sympathise with the queer medical jury to the extent of admitting that no anæsthetic agent should be entrusted to a man who treats syncope by the erect posture, yet still, when we consider the wide prevalence of his error, we must not be too hard on the dentist. We have lately heard of a case in which a poor woman fainted on an English race-course, and the strong arm of the law, in the person of a stalwart policeman, instantly erected her in a sitting position, with her back against a post. Fortunately a medical man passed by in time to save her from death by laying her down again until she recovered; but the chances of her following Mrs. O'SHAUGHNESSY were at one time fearfully great. Moreover, "sitting up" is the most common cause of death after or during enfeebling illness. You hear from the nurse or the friends that the "poor dear *would* sit up to take beef-tea," or "*would* sit up on the night-stool," and that he or she "went off like a lamb." We once witnessed a very sad scene, in which a group of relatives were holding up the corpse of a fine girl, who probably would have been in no danger if she had been allowed to remain where a faint had caused her to fall. Strangely enough, she was to have undergone an operation on the following day; and her death, if it had been twenty-four hours delayed, might easily have been attributed to chloroform.

In this last circumstance — the possible coincidence in point of time of the administration of an anæsthetic with sudden death from some other cause—we have a factor that must never be lost sight of in such cases. There is one well-authenticated history of a man who went to have a tooth drawn and asked for chloroform. The operator had none, and went a short distance to fetch it, to find his patient dead on his return.

The absence in Mrs. O'SHAUGHNESSY's case of any apparent cause for sudden death other than emotional syncope and the upright posture, and the entire sufficiency of these to explain the occurrence, seem to render the verdict of the New York jury one of the most astonishing on record. It can hardly fail to be challenged by American medical journals, and we shall be curious to see what attempts are made to justify it.

THE position of a Director-General may not inaptly be compared with that of the old illustration of a boy putting his hand into a jug of nuts. The bystanders all expect, of course, a share, and a good one. But the hand that clutches many nuts cannot extricate itself, and when it has passed the narrow outlet all are surprised at the small number enclosed in its grasp.

A military contemporary informs us that at the eleventh hour, just when the new warrant of the Army Medical Department was ready for issue, the scheme of the Director-General has been materially modified. A picture lately appeared in one of the comic journals in which Britannia is represented as waiting with maternal solicitude for the appearance of her long-lost child, "Ballot Bill." "Bill" presents such a thin, disfigured, and woe-begone aspect as he leaves the House of Commons that even his own mother may be excused for having doubts about his identity. We can easily conceive that something of this sort may have represented the feelings of those who long ago saw a pet scheme of theirs within the portals of the War Office, which now turns out to be neither more nor less than the new warrant for the Army Medical Service, concerning the terms of which our contemporary speaks with such apparent precision. Mr. CARDWELL's scheme, if the sketch of it in the *United Service Gazette* be correct, is, we should say, a

compromise, and no mistake! Still some concessions and many changes are made. The rank of assistant-surgeon is to be abolished, the lowest grade being that of surgeon. The next rank is to be that of surgeon-major, which is to consist of two classes, those under twenty years' service being surgeon-majors of the second class, and those of twenty years and upwards being of the first class. All surgeons of fifteen years' service are to be promoted, and are to receive the pay of twenty shillings per diem. Putting aside the financial objections, which are generally urged as insurmountable in themselves, we can readily imagine that a proposal for the promotion of assistant-surgeons at twelve years would be stoutly opposed by the Indian Government and the Horse Guards. Medical officers serving in India are, however, to have the local rank (without pay or allowances) of surgeon-major on completing twelve years' service. The title of "inspector" is to be abrogated, "surgeon-general" and "deputy surgeon-general" being substituted for it. Ten years' foreign service is to be a necessary qualification for promotion to the rank of deputy surgeon-general. Those assistant-surgeons of the British service in India who have represented the hardship of seeing their brethren of the Indian Department of twelve years' service promoted over their heads are not likely, we imagine, to congratulate themselves on having obtained the concession of local rank without pay and allowances. Rumours of all kinds are plentiful enough, but we suspect that no one really knows what is to be the outcome of all the planning that has been so long going on in regard to the general staff *versus* the regimental system, the earlier retirement of medical officers, their employment in the Reserve and at the various depôt centres, and twenty other things. The subject is one, however, of so much importance that we must wait for some authoritative intimation before entering further upon it.

THE subject of the expatriation of invalids—especially consumptives—by their medical advisers is assuming more than ever a serious practical aspect; and we cannot but feel much sympathy with the tone of an interesting and even pathetic remonstrance which was lately addressed to the profession by the *Pall Mall Gazette*. The writer says, what is quite true, that specialists in extensive consulting practice are constantly in the habit of sentencing confirmed consumptive patients, after very brief consideration, to a voyage to the Mediterranean, or some other equally distant locality. Small blame to the doctor, says our contemporary, for he is usually much pressed for time, and it is scarcely possible for him to consider anything more than the crude medical facts; but meantime he makes himself the instrument of inflicting severe and needless suffering both upon the patient and the friends.

For our own part, we can hardly speak with so much toleration of the careless haste with which this dreadful sentence of banishment is too often pronounced. No doubt, if the disease be in an early and specially remediable stage, there is a temptation and almost a justification for shutting the eyes to all the difficulties or well-nigh impossibilities which the family or financial circumstances of the patient may present, and for making the importance of the change of climate override everything. Even here, surely, it is the duty of the physician distinctly to put before the patient all the difficulties and expenses of the scheme; he ought so to have furnished himself with all useful details as to be able to say to his client, "I think you are pretty sure to get much more benefit from a winter at Mentone," for example, "than from any other kind of treatment, *but* it will cost you at least —— pounds." But in cases where the benefit is more doubtful, and doubly so in those which we know can only be very temporarily alleviated, we hold that the physician is perfectly inexcusable if he allows the pressure on his time of a roomful of waiting patients to induce him to give a decision in favour of expatriation for any single patient, until he has thoroughly considered every feature of his case, and the effect upon his whole circumstances—not his health only—which the journey may involve. It is scarcely too much to say that, for want of this kind of care and forethought on the part of the physician, hundreds of patients die the miserable death of the exile who feels that his banishment has hurried him to the grave and broken the hearts and half-ruined the fortunes of the dear friends among whom he would have been only too glad to die in peace.

MEDICAL diseases are much more prevalent than surgical, and chronic cases are more frequent than acute, amongst both in-door and out-door paupers. Nevertheless we are struck with the large amount of surgical experience which falls to the lot of Poor-law medical officers. Thus at one time there were returned 1627 fractures, 141 dislocations, 183 amputations, 57 cases of stone in the bladder, 206 of stricture, and no less than 6686 of ulceration of the legs and other parts. In some districts the workhouse infirmary is the only hospital; and in others, the skill and energy of the medical officer appear to have popularised the workhouse as a place of treatment for both medical and surgical diseases. Of medical disorders, old age, nervous affections, and cutaneous maladies are chiefly treated in the workhouse; whilst a very large proportion of the diseases of the digestive and respiratory system are treated by the district medical officers. Two-thirds of the former are chronic cases, whilst 43 per cent. of acute cases are treated in the homes of the poor. Diseases of the respiratory system contribute no less than 82 per cent. of pauper sickness. There were returned 1443 cases of pneumonia and 553 of pleurisy. Of diarrhœa there were 2750 cases. Fevers form 7 per cent. of pauper sickness, and 36 per cent. of the cases are those of scarlet fever. The large majority of cases are treated in the homes of the poor. Only one-fourth of the cases of small-pox are admitted into the infectious wards. Rheumatism forms 4½ per cent. of all diseases, and 75 per cent. of the cases are treated at home. Of scrofulous cases 60 per cent., and of fractures and amputations no less than 80 per cent., are treated at home. The sequelæ of confinement are chiefly found out of the workhouse. Dr. SMITH thinks this an argument in favour of extending the treatment of the sick poor in the workhouses. No doubt the most striking result of this inquiry has been to show in how great a degree disease, whether surgical or medical, of the most important kind, is treated in the homes of the poor;

but it by no means follows that the enlargement of workhouse infirmaries is the proper remedy. For ourselves, we should prefer to get accurate statistics of the results of home treatment before advocating such a step. The introduction of well-served dispensaries, and the appointment of a nurse for attending the out-door sick, would probably do much to improve home-treatment; whilst it is not open to the same objections as removal to the workhouse. If, however, hospitals should be found most suitable, we think that the Government would do well to entertain the proposal of the Irish Commissioners of establishing a sort of cottage hospital in connexion with the dispensaries. Few will deny that sickness and pauperism are different things; and the more distinctly they are separated the better. Besides, it is not wise to relieve the lower orders from all responsibility for the treatment of their relatives and friends; and by the cottage-hospital system the mother is allowed to assist in nursing her sick child, the daughter in nursing her aged parent, and the wife in attending her husband with a broken leg.

Medical Annotations.

"Ne quid nimis."

THE PATHOGENESIS OF PYÆMIA.

THE interest excited by the statements recently made by Dr. Sanderson before the Pathological Society with regard to the genesis of pyæmia induced that gentleman to supplement those statements by a series of demonstrations at the meeting of the same Society on Tuesday last touching the nature and conditions of origin of bacteria in the fluids of the body in connexion with the development of pyæmia. We have previously summarised the main conclusions arrived at by Dr. Sanderson. The object which he had in view on Tuesday was—first, to show the presence of bacteria in the infecting fluid of pyæmia, in the blood of living pyæmic patients, and in pyæmic abscesses; and, secondly, to prove that these living organisms were not introduced into the body from without, but were apparently produced within the body. It will be remembered that in certain experiments recorded in one of the reports of the Medical Officer of the Privy Council Dr. Sanderson had shown that bacteria were introduced into fluids by contact with impure surfaces, and that when glass-rods, test-tubes, and the like, had been heated before being brought into contact with fluids, no bacteria were therein developed. Dr. Sanderson, we believe, had taken care in his experiments on pyæmia to avoid the introduction of germs from without into the peritoneal cavity. He first showed the liquid taken from the peritoneum of a guinea-pig twelve hours after the injection of fluid into it from the peritoneum of a kitten in which peritonitis was excited by the injection of peritoneal fluid. This liquid was swarming with minute bacteria, chiefly spheroidal, this being the feature of the liquids possessing the most intense infective character. The second specimen was the blood of an animal infected as the guinea-pig, and bacteria existed in the blood of the living animal taken from the heart. The existence of these organisms in the blood was regarded as the index of the general state of infection. The third fluid was that contained in the peritoneum of a guinea-pig twelve hours after injection into that part, of the subcutaneous fluid formed in connexion with an abscess produced by the introduction of the solution of ammonia beneath the skin, the injection being made with calcined instruments, and with the special object of avoiding the introduction of external agents; and this fluid contained bacteria. A fourth fluid was exhibited—viz., the liquid from an abscess of the thigh of a puerperal woman, removed seven weeks after her confinement, the fluid being obtained through a fine canula into a glass tube, both of which had been superheated, the latter being at once closed. This fluid contained living organisms in it at the first moment of examination.

THE INTESTINAL LESIONS IN CHOLERA.

OUR excellent contemporary the *Indian Medical Gazette* has taken us to task for what we said on this subject in reviewing a pamphlet by Dr. Felix von Niemeyer (translated by Dr. P. W. Latham) on the symptomatic treatment of cholera. Such a heading as "THE LANCET *versus* Intestinal Lesions in Cholera" is calculated to give a false idea of the position we assumed, which the article that follows fails to rectify. A large proportion of the German authorities, besides some microscopists of eminence in this country, following Boehm, have held that there is in cholera a wholesale shedding of the intestinal epithelium. Unless we have altogether misapprehended Niemeyer's meaning, this forms the central idea round which all his views of the pathology and treatment of this disease are grouped. He compares the state of the intestine with its villi denuded of epithelium to that of the skin deprived of its epidermis after a scald, and he regards the hyperæmia and discharge of serous fluids from the intestinal mucous membrane in connexion therewith as explaining some of the most striking phenomena of cholera. Referring to this view, we said we feared it must be given up. Now there are two things that require to be kept quite distinct in this inquiry, first, the post-mortem evidence of this loss of epithelium; secondly, its relation to the disease, supposing it to be an ante-mortem phenomenon. Of course we never contended that intestinal lesions, or this separation of the epithelium, were not commonly found after death from cholera; but we did say, and we still assert, that the doctrine which regarded these morbid processes as essential to the production of its characteristic symptoms is an unproven, if not altogether false one. If Dr. Cunningham's experience was founded on the thorough and accurate observation of even one fatal case in which there was found little or no detachment or destruction of epithelium, it is clear that it cannot be an essential phenomenon. It is scarcely to the point to urge that this writer's observations are based on a limited number of post-mortem examinations, seeing that in a series of microscopical examinations of the dejecta of cholera cases he failed to discover the presence of such epithelium, unless very exceptionally. It must be remembered, moreover, that the published observations of Dr. Lewis, his *confrère* in the scientific investigation into cholera instituted by the Government, point to exactly the same conclusion. "Judging," says Dr. Lewis, "from the cholera stools which have come under my observation in Calcutta—several hundred specimens,—I believe that not more than two out of twenty slides will contain distinct traces of columnar epithelium." Considering the rapid transudation of fluid into the intestines, and the maceration which the mucous membrane undergoes, we might expect to find the epithelium separated after death; but if its rapid desquamation be the cause of the symptoms during life, the wonder is that any should be found in the intestines of a patient, and that it should not all have been washed away with the dejecta. We are quite ready to revise our conclusions by the light of any new facts; but the evidence that we have at present seems to us to indicate

that the major portion of the organic matter in the stools cannot be identified with cylindrical epithelium or its *débris*. Possibly Mr. Macnamara's further observations may supply the information required.

THE LONDON HOSPITAL SCANDAL.

OUR readers will see that this unfortunate business is still kept before their view. We insert this week another letter from Mr. Maunder, doing so in order that he may have the most complete facilities for stating his own view of the case, and we insert also a letter from Mr. Dove. Both are written with a view to urge a sort of general inquiry into Mr. Rivington's conduct as a surgeon, and into the particular case which has occasioned the recent trouble. We cannot see any objection to such a course if the profession wish for details which are not at present before them; but those who ask for an inquiry are bound to indicate how it should be carried out. It is not quite clear to us in what manner the proposed impartial tribunal could be constituted; and it may fairly be urged that there would be inconvenience in reopening a case that has been fully inquired into already by the hospital authorities, with the result that Mr. Rivington's resignation of his office was not accepted, and that he was fully reinstated in his position.

As we have said already, however, we regard the question concerning what Mr. Rivington did or did not do as one that is comparatively insignificant. The important question, which affects every hospital surgeon and every hospital patient, is how a case of alleged unskilfulness on the part of a surgeon should be dealt with. This question is not at all one of professional etiquette, but ascends to much higher ground, and turns upon the best manner of doing substantial justice between man and man. The duties of a hospital surgeon are of a very difficult, arduous, and anxious character. It is essential to their right performance, and is therefore essential to the safety of patients and to the public good, that those engaged in such duties should be absolutely free from unnecessary anxieties, and should be able fully to confide in their colleagues as in persons able and willing to render counsel and help in any difficulty that may arise. There has probably never been a surgeon, certainly there has never been a great surgeon, in whose practice accidents have not occurred. Accidents are to be lamented, but they are inseparable from human affairs; and it would be bad policy to ruin and degrade a surgeon on account of an accident, just as it has been found bad policy to shoot a general who has lost a battle. Nothing would be more likely to unnerve a surgeon, and to render him unable to repair the effects of an accident, than the knowledge that he could not trust his colleagues. We say again, therefore, that no circumstances whatever can justify a colleague in taking to a lay committee a charge of unskilfulness prior to its investigation by the whole body of the medical staff.

There seems in some quarters to be an idea that Mr. Maunder's action, although irregular, might be conducive to the safety of patients, and might therefore be in some sort condoned. We have already stated reasons for differing from this view, and for thinking that such action, if it were the rule, would paralyse the hands of a surgeon when they were most needed. The public will ask, "How, then, are we to be protected?" The answer is plain, and the protection is ample. The medical staff of a hospital, acting as a body, may rightly do what one of their number cannot do except wrongfully. If a surgeon were really unskilful, and unfit to hold hospital office, there would be no difficulty in obtaining from his colleagues a decision to that effect, and one that could not be disputed. It would be alike their interest and their duty to relieve the institution of an officer who would bring it into discredit; and any one of the body would be able to bring the matter officially and openly before the rest.

The inquiry which our correspondents ask for might have many issues; but whatever it might disclose, it could not change our opinion that Mr. Maunder's course in the matter has been of a kind that is calculated to be equally detrimental to surgical skill and to public safety.

AN AMERICAN PROFESSOR ON MEDICAL ART.

IN a valedictory address to the graduating class of the University of Louisville, Dr. Cowling gives some results of a recent European tour, and expresses some views on things medical which are deserving of notice. He contrasts the state endowments of Germany, and the public interest excited by the appointment to a leading medical professorship in that country, with the private benevolence of English hospitals and the practically unlimited number of medical schools. Dr. Cowling has come to the conclusion that "English teachers indeed, with a few brilliant exceptions, are not very happy in imparting their knowledge..... As a general thing, it is hard to recognise in the lecturers in the English amphitheatres the men who have made our literature so glorious."

Dr. Cowling proceeds to discuss the requirements in study for a medical diploma, and, on the subject of preliminary examination, upholds the requirement of Latin, but decries Greek as non-essential. Very simple arithmetic, and no mathematics, he thinks, ought to be demanded of the medical student; and he lays down broadly "that he who comes into medicine with a degree in arts, and expects an easy victory over earnest men who have not had this advantage, will find himself greatly mistaken." Dr. Cowling quotes with approval Professor Huxley's dictum, that "anyone who adds to medical education one iota or tittle beyond what is absolutely required is guilty of a very grave offence," and would eliminate botany, zoology, and materia medica from the curriculum.

Dr. Cowling believes that the three years' study demanded of American students is sufficient, and would not fear to submit his pupils to examinations in London or Vienna, all of which he attended. "The special forte of American physicians is to treat disease"; and it is also remarked, "What the American people want just now from the medical schools is doctors. If we manufacture anything else, to any great extent at least, it will be a drug on the market." This demand for doctors rather than philosophers extends, we believe, also to the "old country," and we wish some of our medical legislators would sometimes bear the fact more fully in mind.

THE CONJOINT SCHEME IN IRELAND.

THE Irish bodies have agreed in conference upon a scheme which has been already sketched in our columns in the admirable speech of Dr. Stokes in the proceedings of the Medical Council at its late meeting. The points of it are—the creation of a Committee of Reference, consisting of two from each of the Irish bodies, whose duties shall be (*a*) to determine the number of examiners to be assigned to each subject of examination; (*b*) to arrange and superintend all matters relating to the examinations, in accordance with regulations approved by the co-operating medical authorities; (*c*) to consider such questions in relation to the examinations as they may think fit, or such as shall be referred to them by any of the co-operating medical authorities, and to report their proceedings to all the said authorities; (*d*) to bring under the notice of any of the co-operating medical authorities any dereliction of duty on the part of any examiners appointed by that body. Various

opinions of the conference are expressed on matters of detail, such as the subjects that should be included in the preliminary examinations to be passed before the commencement of medical education. It is suggested that the appointment of examiners in arts be entrusted to the universities taking part in the scheme, and that the professional examinations be three in number; that graduates in arts who have completed a full professional curriculum, and have passed in their respective universities an examination in all subjects comprised in such curriculum, except those reserved for the final examination of the Conjoint Board, should be admissible to such final examination; that no member of the Committee of Reference be eligible as an examiner; that professors and lecturers in the universities and medical schools, but no person engaged in private tuition, shall be eligible for the office of examiner; that the fees to candidates not graduates in arts be thirty guineas, and that, after paying expenses, the surplus be divided between the College of Physicians and the College of Surgeons as follows: three-eighths to the College of Physicians, and five-eighths to the College of Surgeons. In consequence of the communication dated April 17th, 1872, from the Chancellor of the Queen's University, this university is omitted for the present from the table of examiners. Candidates who pay the thirty guineas, and pass the Conjoint Board, will be entitled to the licence of the College of Physicians and that of the College of Surgeons.

It is obviously impossible from such an outline to judge of the probability of this scheme working well or otherwise. In fact it is rather an expression of general principles than a scheme. The Queen's University is not included, and preserves all its powers independently. Further, the so-called scheme includes some details which seem premature, and is not precise on some points of great importance—as, for example, the degree of independent power to be enjoyed by the Committee of Reference, the mode of appointment of examiners, the distribution of the power of election, &c. &c.

DR. PETTIGREW ON CIRCULATION.

DR. PETTIGREW delivered his third lecture on the 17th inst., before the Royal College of Surgeons, Edinburgh. Entering more fully than on the previous occasion into the forces concerned in the circulation of plants, he showed that the gap between vegetable and animal circulation is smaller than might have been expected—a fact which becomes obvious when the lowest animals are compared with the highest plants. In spring and autumn the circulation is carried on mainly by single tubes; while in summer, when the leaves are formed and the roots are sprouting, the tubes are united in the leaves and roots by a system of vessels analogous to the capillaries of animals, forming a system of syphons of which the free extremities are directed alternately in the direction of the leaves and roots. These syphons enter into various combinations, but a certain number of them being open towards the roots and leaves, they are equally adapted for sending up surplus sap from the ground, and sending down excess of moisture from the air. The two systems of syphon-tubes, moreover, balance each other—the contents of the syphons moving in an upward or a downward direction according as the impulse is conveyed from the ground or the air. It is a matter of indifference, Dr. Pettigrew thinks, whether the sap is presented by the roots or the leaves; in either case it necessarily passes through the tree. A tree is always surcharged with tenacious juices; and when watery fluids are presented either from above or from below endosmose and exosmose are established. Dr. Pettigrew illustrated this by two tubes, one end of which was closed by an animal membrane. The one tube contained water, the other syrup. When the tube containing the syrup was placed in water the water rose in the tube just as the sap rises in the stem of the tree. When the tube containing the water was placed in syrup, the water descended in the tube just as moisture presented to the leaves of trees passes down through their stems. Physical forces contribute largely to the circulation of plants. Equally interesting was Dr. Pettigrew's explanation of the circulation in the individual cells of plants. Taking as his starting-point the counter-currents produced by endosmose and exosmose, he showed that when a cell is placed between two opposite currents, one current washes and penetrates one side of the cell, while the other washes and penetrates the other side. In this way the contents of the cell are made to gyrate—just as happens if opposing forces are made to act upon a wheel. If one side of a wheel is depressed while the other side is elevated, gyration results. The two forces, indeed, though acting in contrary directions, produce a common result. Movements occurring in cells "inaugurate" the general circulation; but when the general circulation is fairly established it contributes, nay actually produces, the gyration of the cell-contents. "The general circulation is then a differentiation of the intra-cellular circulation." Dr. Pettigrew concluded by saying that little importance attaches to the swaying of branches and stems in the wind as a cause of circulation—a process which goes on in hot-house plants and in trees nailed to the walls.

THE EJECTED POOR AND LONDON IMPROVEMENTS.

KNOWING the hardships to the poor in the matter of house accommodation occasioned by the great metropolitan improvements, and the indirect injury that accrues to ratepayers from the diseases engendered by overcrowding, we trust that a principle of legislation urged by Sir Sydney Waterlow will be adopted. It is in advance of anything that has yet been conceded by Parliament in the interest of the ejected poor, but not in excess of what is due to them. Everybody except them is considered and compensated in metropolitan improvements, and yet they suffer in thousands by almost every Bill of the kind that Parliament passes. Two now before Parliament involve the destruction of 1152 houses, and the displacement of 3870 persons. The Metropolitan Board of Works seeks power in its Metropolitan Street Improvements Bill to remove 668 houses, and displace 1457 persons. The two Bills for the construction of the Mid-London Railway propose the removal of 487 houses, inhabited by 2413 persons. Sir Sydney proposes that all parties seeking such powers shall be required to set apart land so obtained for sale or lease for the erection thereon of dwelling-houses, &c., for the working classes. We believe that the Board of Works have agreed to insert a clause embodying Sir Sydney's proposal in their Bill, and we devoutly trust that the clause will be accepted as a principle in every such Bill. It is high time to claim a right of residence for working men in London. Working men must have houses in London. We have no notion of a legislation that considers every claim but this, the neglect of which means immense inconvenience to the poor and danger to the rich. Sir Sydney Waterlow has amply demonstrated that commercially such uses of land will be fairly profitable. He has shown that five per cent. can be had for money invested in the erection of houses for the working classes. He does not, indeed, ask that the railway companies or the Board of Works shall be compelled to build, but that they shall be compelled to appropriate a

certain proportion of the enormous spaces which they purchase for the erection of houses fitted for the classes whose houses they remove. We are all offended by many large vacant and unoccupied spaces to be seen in various parts of London. Sir Sydney explains that the Board of Works and other owners wait to get a very high price for these spaces. While they are waiting the poor are paying very high rents, and living in single rooms. We sincerely hope that Parliament will accept the principle urged by Sir Sydney Waterlow, and save us from the discredit of having it said that in reconstructing London everybody but the people had been remembered. It is one of the most serious charges brought against the French Empire that the workmen of Paris were heartlessly driven into wretched rookeries, the contrast of which with the palatial structures of the wealthy was unbearably offensive. Let us take legislative precautions against such an error in London.

FEVER AND SMALL-POX IN LONDON.

BOTH at Homerton and Stockwell there has been a decrease in the admissions of small-pox, but at Hampstead there was a slight increase. Dr. Grieve has presented a valuable report on the influence of vaccination, age, sex, and occupation, on the mortality of small-pox. The mortality in the non-vaccinated was 51·12 per cent., that of the vaccinated 11·40 per cent. The mean, 19·36, was above the average of former epidemics. In 3555 cases the number of marks was noted. The mortality of those having one mark was 17·39 per cent.; with two marks, 12·17; with three, 10·58; with four, 8·38; with five, 6·43; the practical deduction being that the larger the number of vesicles the more complete is the protection.

Out of 6221 cases, in only three was there any satisfactory proof of previous revaccination. No revaccinated nurse has taken the disease. *Revaccination is, therefore, a sure protection against small-pox.* It is, however, quite necessary that some local effect must have been produced in persons over fifteen years of age. The extremes of age are alike unfavourable. Amongst the unvaccinated, the minimum mortality was between 10 and 20. All die who are over sixty years, and 70·87 per cent. of those under five years. Unvaccinated children under one year rarely recover. Male adults are more frequently attacked than females, and the mortality is higher in the former. Dr. Grieve thinks this due to their active life and more irregular habits. Cabmen, blacksmiths, laundresses, and cooks are specially liable to the hæmorrhagic form. The Local Government Board have sanctioned the purchase of a fresh hospital site in the neighbourhood of the New Kent-road. It is not probable that any permanent buildings will be raised.

THE MASTER AND SERVANTS (WAGES) BILL AND MEDICAL APPOINTMENTS.

THE clause which is to continue the legality of deductions from wages for the purpose of providing medical attendance on men employed is as follows:—

"Nothing in this Act contained shall render invalid a contract for a deduction of any sum in respect of medicine, medical attendance, subscriptions to hospitals, infirmaries, and dispensaries.....Provided that no deduction shall be made in respect of medical attendance when the majority of the workmen shall have notified in writing to the master their objection to the medical attendant employed."

The reasonableness of this clause will be admitted by those who wish to give the *employés* some control over the medical man appointed. The wisdom of it, as giving the sanction of law to deductions for medical attendance, will be admitted by all who know the medical needs of masses of men, and the impossibility of meeting them except by organisation and contract. Mr. Magniac has given notice that on Thursday, May 30th, he will move in Committee an amendment to the effect that nothing in the Bill "shall render invalid any deduction from wages for the purpose of providing medical attendance upon any person to whom such wages are payable, *provided that in respect of such provision a special rule is in force, to be approved in manner provided by Clause 28 of this Act, whereby the choice of the medical practitioner by whom it is his desire to be attended shall be secured to such person.*"

Such a principle would go far to destroy the value of the medical appointments, and render them of no interest to the profession. Moreover it would be impracticable and costly. It would generate dissatisfaction and discord. If every man were to choose his own doctor, *a fortiori* every man's wife would have to do the same. Surely it is enough that the majority of the men can control the appointment. We hope that Mr. Magniac will not persist in marring the Bill as far as it legalises deductions for medical purposes, and that if he does the House will not entertain his suggestion for a moment. The Ulverstone Board of Guardians, whose opinion in such matters is quite authoritative, has petitioned the House of Commons to respect existing arrangements for providing for periods of sickness, fearing that if they are not respected there will be in mining districts an unprecedented addition to the amount of poor relief. The Board is right. Such arrangements keep thousands from becoming paupers, and ought to be upheld in all their integrity.

COMPARATIVE DIETETICS.

AT a late meeting of the Zoological Society, the Prosector of the Society gave an account of a dissection of an ostrich which had died in the Society's gardens. The cause of death was found to be copper-poisoning, "a number of copper coins and pieces of coin in a much worn state having been found in its stomach."

In spite of numerous excellent manuals on the natural history of animals, there seems yet to prevail a very great ignorance as to the food of animals by no means very rare and of by no means microscopic minuteness; of the truth of which statement the visitor to any zoological garden, either here or on the Continent, can easily satisfy himself. We remember once watching with great amusement a lady of that spinster-like aspect which is usually correlated with a partiality for a houseful of pets vainly trying to induce the great ant-eater to indulge in the unwonted and, unfortunately, impossible treat of a raisin; at another time an elderly gentleman was, with the best intentions, throwing nuts into the somewhat capacious throat of a rhinoceros, in which animal fortunately no vermiform appendix to the cæcum exists for the beneficent purpose of catching hard and indigestible bodies. In most zoological gardens the somewhat contracted lake in which the otter disports itself will, spite of the fish-eating habits of the animal, generally be found littered with bread, or that bun which in the popular mind suffices to stay the hunger of all sections of the zoological garden animal creation, whether carnivorous, herbivorous, or insectivorous; the *placental* mammals being evidently literally regarded as those quadrupeds who will eat cake.

However, when man, civilised man, "the roof and crown of things," regards his stomach more in the light of a carpet-bag than a highly delicate and sensitive organ, hurriedly packing into it city banquets, sherry and biscuits, sometimes even forks, lobster salad, "cups" of various brews, colossal decoctions of tea, dinner pills, and the like, can it be wondered at that he treats the "lower animals" no better, it can hardly be said worse; regarding the ostrich, *inter alia animalia*, as a bird whose gizzard is pecu-

liarly and beautifully fitted by nature for extracting nourishment out of nails, knives, halfpence, &c., a food which, we need hardly state, is not provided by the desert home of this somewhat overfed inmate of our zoological gardens, whose fate it seems is sometimes to be that it shall be "killed by kindness."

THE CHRISTINA EDMUNDS CASE.

THE case of the poisoner, Christina Edmunds, has lately been made the subject of some energetic remarks by the Mayor of Brighton; and as the grievance of which that gentleman complains is incidental to a part of our judicial system which is sorely in need of reform, we are not sorry that the subject has been stirred up. The mayor complained bitterly that, while the expenses of the trial fell upon Brighton, the verdict of a Brighton jury was held of no account, the Government sending down two medical men to certify as to the sanity of Miss Edmunds, and eventually commuting her sentence on the strength of their opinion. The mayor can hardly have meant to say that the Brighton people, having paid for the luxury of bringing a female prisoner to the scaffold, ought not to have been deprived of the gratifying consciousness that she was actually hanged. In fact, as the *Pall Mall Gazette* remarks, he would have done well to leave financial matters out of the question; he would then have been perfectly justified in denouncing the actual events, at and after the trial, as a judicial scandal. The real discredit does not fall, however, upon the present Home Secretary, but upon the monstrous system under which such difficult and delicate questions as that of the sanity or insanity of a prisoner are left to be decided by a jury of laymen assisted only by the *ex parte* evidence of medical witnesses arrayed in two hostile camps. We know nothing which more completely proves the hollowness and insincerity of our would-be reformers of criminal procedure than the fact that this crying scandal has not long ago been remedied by the introduction of a scheme for appointing medical assessors to decide all such questions as *amici curiæ*. Poor Mr. Bruce is not to be blamed for adopting the only means which lay in his power for preventing the occurrence of that truly fearful calamity —the execution of an insane person upon an ignorant and perverse verdict given in the teeth of the preponderating weight of medical evidence. But he—or somebody else in the Government—will be seriously culpable, if he does not take an early opportunity of presenting to Parliament a well-considered plan for securing the country against the perpetual recurrence of these discreditable affairs by taking the decision of purely scientific questions altogether out of the arena of forensic strife, and allowing them to be decided by persons of first-rate competence and absolute disinterestedness.

THE NATIONAL HOLIDAY.

THE sometime characteristic of Englishmen, that they take their pleasure sadly, seems to be fading away before the genial influences of early closing and more numerous holidays. The crowds who on Monday filled the streets, besieged the railway stations, and carried the omnibuses by escalade, showed as hearty an appreciation of the fine weather, and of the good things present to or in store for them, as could well be rendered evident by human faces and human voices; and the prevailing expression of countenance was quite distinctly different from that worn by people of the same class when engaged in their ordinary avocations, or in travelling in their accustomed tracks between the dinner and the workshop. It was good to notice, also, how little the prevailing hilarity was due to excessive stimulation; and how placable was the temper even of the thousands of people who were compelled to undergo most tedious waiting before they could make their way to the departure platforms of the railway stations. The experience of Whit-Monday fully accords with that of the Thanksgiving Day, in showing that our population has of late years made great strides in the direction of humanity, sobriety, and self-control; and, under the guidance of these influences, a national holiday must be almost an unmixed good to the community. There can be no doubt that the increasing strain of modern life upon the nervous system, even among the humblest classes, renders periods of rest and recreation more necessary than they have ever been before; and it must be expected that, with the capacity to use holidays wisely, will come also an increased appreciation of their benefits, and an increased determination to obtain them.

PEPSINE AND ITS ACTION ON BLOOD-FIBRINE.

DR. V. WILLICH contributes a long paper to Pflüger's *Archiv* (Band v., Heft 8) "On the Ferments effecting the Digestion of Fibrine. The digestive fluid he employed was the fresh glycerine extract of the minced mucous membrane of the stomach of the pig. The fibrine was obtained from fresh blood. This was macerated in a solution of hydrochloric acid, containing 0·2 per cent. From the results of his experiments it appears that fibrine absorbes pepsine very energetically; that the process of digestion commences with the formation of a feeble chemical combination between the pepsine and the acid, and that this compound is the really active substance. In regard to temperature, digestion proceeds slowly even at 40° Fahr., but with the greatest rapidity and energy at temperatures between 95° and 112° Fahr. Higher temperatures than this retarded or altogether prevented the action. For the digestion of a certain quantity of fibrine, definite quantities both of acid and of pepsine are requisite. Meissner's parapeptones and metapeptones are initiatory stages of the action of the pepsine on the fibrine, and, if the action proceeds, are converted into peptone, but if the amount of pepsine be insufficient they may remain unaltered.

IS SMALL-POX ABORTED BY VACCINATION?

IT would be very curious indeed if it should turn out that vaccination not only prevents but aborts small-pox, even if not practised till the eruption appears. This is the contention of Mr. Furley of Edinburgh, who speaks for himself in another part of our columns. We have been so accustomed to believe that vaccination had no power of controlling an attack of small-pox unless practised early enough for the vesicles to have reached the areolar stage before the first symptoms of small-pox showed themselves, that our first disposition is to believe that Mr. Furley owes any apparent success to a happy experimentation on mild cases. But authority is sometimes wrong and prematurely oracular. We devoutly wish that it may turn out so in this case. If Mr. Furley's conclusions are false, we shall soon hear of their refutation. And it is to be allowed that the number of facts on which the opposite conclusion is based do not seem to be very large. According to Mr. Furley, too, something depends not only on vaccination, or even successful vaccination, but on the degree or the quantity of it. And there is much to make us think that quantity counts for more than has been thought; though here we are under great obligation to Mr. Marson for impressing on the profession the importance, not only of vaccinating, but of doing it freely in many places. Mr. Furley's treatment of small-pox seems at any rate harmless, and should have an early and crucial

trial. The Clinical Society would do good service by appointing a committee. Though we confess to a deep respect for the authoritative doctrines on the subject, we never felt more anxious that the authorities should be proved to be wrong. Our duty is to open our columns to both sides of the question.

MALTA.

WE have received from a correspondent some important and very unsavoury particulars as to the hygienic conditions of this important fortress. He reports that the state of the well-built stone houses in Valetta (with the exception of the buildings directly under the control of the naval and military authorities) is so bad from excessive overcrowding as to defy description. The Maltese usually share their habitations with their horses, goats, poultry, dogs, and cats, and the respective parasites appertaining to each, which latter are by no means few in number or deficient in variety. Many of the houses are unprovided with privies of any kind, so that the street becomes the depository of human as well as animal ordure. The presence of sewer gases is continually perceptible, and the condition of the public urinals is filthy and disgusting in an extreme degree. A new suburb called Shiemar is entirely undrained, a sort of reservoir being provided under each house (in close proximity to the water-tank), which receives all the solid and fluid refuse, vile smells being of course a necessary consequence. The stone commonly used for building in the island is porous, and ill-adapted for the construction of tanks and drains, although it is lined with some kind of cement, which, however, invariably cracks. The last issue of *Il Barth*, a local periodical devoted to medicine and science, states that "the present maladies are gastro-bilious fever, typhoid, diphtheria, erysipelas, and catarrhal affections of the respiratory organs."

It appears that this unsatisfactory state of things has been brought about chiefly by a clumsy jumble of administration, which may perhaps be most properly called local self-government. The Maltese are permitted to look after themselves, and, although rules framed by the home authorities are laid down for their guidance, these rules, as also the police regulations, are not enforced. So that, under the present *régime*, Malta is now competing with Turkey for the highest honours in dirt, and will run Galata close in its comparative statistics of mortality, if cholera reaches the shores of the Mediterranean this year.

THE MEDICAL BENEVOLENT COLLEGE.

WE are pleased to record the continued prosperity of this excellent institution, which now affords a home to twenty-four resident pensioners, pays annuities to twenty more who are non-resident, and maintains and educates fifty foundation scholars, the sons of necessitous medical men. There are also 150 boys, whose board and education are paid for by their parents. Partly on this ground, that the educational department of the College is not "benevolent" as regards three-fourths of its inmates, and partly for other reasons, we should be very glad to see the word "benevolent" omitted from the name of the institution, where it is distinctly out of place. Even as regards the pensioners and foundationers, the asserted "benevolence" is seriously impaired by the continuance of the objectionable system of election by votes, with all the costly and troublesome canvassing that it entails, and with its certainty that the most deserving cases can seldom, if ever, be elected. We greatly regret that the Council will not at once do away with this abomination. In reply to Dr. Liddell's objections to it, urged at the recent meeting, Dr. Jonson said that the Council found the difficulty was so great, and opinions among the subscribers were so divided, that they did not feel justified in attempting a reform. We are quite sure that they ought to insist upon a reform; and that, in no long time, it would abundantly justify itself. It reminds us of the old saying that the law and the London tavern are open to the poor, when we see the directors of a professing charity place an impassable barrier in the way of the most proper among the applicants.

To turn to a more pleasing theme, we have to record an act of great munificence on the part of Mr. Erasmus Wilson, who has signified his intention to erect a master's house at the College, with accommodation for boarders. Mr. Erasmus Wilson's enlightened liberality is not only honourable to himself, but reflects honour upon his profession.

PRESIDENTS OF MEDICAL SOCIETIES.

THE Council of the Clinical Society has, we are glad to hear, passed a resolution by which a return to the original practice in the future election of presidents will be secured. When the Society was founded it was arranged that the election to the presidency should be *bonâ fide* annual, and it was on these terms only that Sir Thomas Watson consented to be elected. It so happened that Sir James Paget's first year of office came to an end during the excitement of the proposed amalgamation of the medical societies, and it was thought advisable that he should represent the youngest of the societies in any negotiations, hence his re-election. The example thus set was followed in the case of Sir Wm. Gull, though not without considerable opposition. The Council has now resolved that all future elections shall be solely for one year, and thus an alternation of medical and surgical presidents will be duly secured.

We commend the determination of the Council of the Clinical Society to the consideration of the councils of the sister societies. At the Royal Medical and Chirurgical and the Pathological Societies, the election, though nominally annual, is *de facto* biennial, and it may be doubted whether a better attendance and more energy on the part of the chairman would not be secured if he were to hold office for only one year. In the case of the Medical and Chirurgical Society, the president of which has to deliver an annual obituary record of deceased Fellows, the preparation of two such addresses must become an unmitigated bore.

In selecting a president the council of each Society would do well to choose a gentleman who has shown an active interest in the working of the society in question; and we think gentlemen occupying lucrative posts—such as Examinerships at the College of Surgeons,—the duties of which necessarily clash with the meetings of the Society over which they preside, should be chary of accepting such honorary duties.

THE STUDY OF GREEK.

THE prevailing feeling against the demand of a knowledge of the Greek language as one of the objects of an ordinary education, has received a considerable impulse and great encouragement from the recent speech of the Chancellor of the Exchequer at the University of London and the newspaper comments thereupon. We are not surprised to find Mr. Lowe expressing himself so strongly in favour of omitting Greek from the curriculum of those about to engage in medical, scientific, or commercial pursuits; for we have before us a report of a sub-committee of Convocation of the University of London specially appointed to inquire into the subject. Convocation has not as yet come to any resolution upon the question; but the report is so suggestive that it can hardly fail to have its weight. It is an undoubted hardship that degrees in medicine and science in the University of London should be

barred against all who cannot cram up sufficient Greek to pass the Matriculation Examination; and the proof that the number of candidates for the study of medicine who shirk the subject is large, is shown by the numerous entries for the Preliminary Examination of the College of Surgeons, where Greek is not a compulsory subject. The suggestion made in the report to divide the matriculation into two heads, under which respectively Greek should be compulsory whilst Chemistry should be omitted, and *vice versâ*, would, we think, admirably meet the difficulties of the two great classes of youths to whom these two subjects are *caviare* respectively.

TEA DRUNKARDS.

DR. ARLIDGE, one of the Pottery Inspectors in Staffordshire, has put forth a very sensible protest against a very pernicious custom which rarely receives sufficient attention either from the medical profession or the public. He says that the women of the working classes make tea a principal article of diet instead of an occasional beverage; they drink it several times a day, and the result is a lamentable amount of sickness. This is no doubt the case, and, as Dr. Arlidge remarks, a portion of the reforming zeal which keeps up such a fierce and bitter agitation against intoxicating drinks, might advantageously be diverted to the repression of this very serious evil of tea-tippling among the poorer classes. Tea, in anything beyond moderate quantities, is as distinctly a narcotic poison as is opium or alcohol. It is capable of ruining the digestion, of enfeebling and disordering the heart's action, and of generally shattering the nerves. And it must be remembered that not merely is it a question of narcotic excess, but the enormous quantity of hot water which tea-bibbers necessarily take is exceedingly prejudicial both to digestion and nutrition. In short, without pretending to place this kind of evil on a level, as to general effect, with those caused by alcoholic drinks, one may well insist that our teetotal reformers have overlooked, and even to no small extent encouraged, a form of animal indulgence which is as distinctly sensual, extravagant, and pernicious, as any beer-swilling or gin-drinking in the world.

MRS. GLADSTONE'S CONVALESCENT HOME.

AT Woodford, in Essex, Mrs. Gladstone's Home for Convalescents not only subserves a very useful purpose, but is also a kind of model on which similar institutions of the kind should be established near every great life-centre. Its origin out of the cholera epidemic in 1866, when the poor convalescent from that disease was in danger of relapsing from the want of adequate conditions of recovery, is well known; and, thanks to its excellent management, it now stands alone among its fellows for its requiring no subscribers' tickets for admission, and no weekly payments. During the past year 474 hospital cases were received within its walls, while several girls stepped out of it into good situations. Distress, whether ordinary or exceptional, among the poor has been abundantly relieved, down even to the supply of clothes and fuel, from its beneficent stores. Last year the expenditure was £1701 8*s.*, nearly all of which was consumed in the maintenance of the Home itself. Each inmate cost per diem 1*s.* 0¾*d.*, as compared with 1*s.* 0¼*d.* last year; while 1234 men, women, and children enjoyed the full benefits of the Home, as compared with 1081 in 1870. Increased subscriptions must come in to meet increased demands on its resources; and we trust the profession will lose no opportunity of aiding in the support of an institution so ancillary, not only to medical treatment, but to the diffusion of sound precept and practice as to the preservation of the public health.

OPIUM-EATING IN AMERICA.

THE tobacco-chewing proclivities of a section of the American community have been pretty freely and forcibly depicted, chiefly from the expectorant point of view, by Charles Dickens; but if that gifted satirist had lived to pay another visit to the United States, he would have found a new "chawing" habit upon which to exercise his facile pen. We allude to opium-eating, which has lately become very prevalent in some of the western states; and to such an extent is it practised in Kentucky that the Legislature of that State has just passed a bill by which any person who, through the excessive use of opium, may be incapacitated from managing himself or his affairs, may, upon the affidavit of two citizens, be placed and confined in an asylum, where he would be subjected to the same restraint as lunatics and habitual drunkards. The fact that it was necessary to call such a bill into existence is sufficient proof that the evil is deep-seated, and has no element of indirectness in its claims upon the attention of American physicians and reformers.

MUTTON VERSUS MEDICINE.

A PHILOSOPHICAL guardian of the Honiton Board, Mr. Coleridge, has been accounting for the increasing out-door relief in the union by the increasing tendency of medical officers to give beef, wine, and mutton instead of strengthening medicine. Mr. Wodehouse, the Government Inspector, explained that the doctor had no power to order, only to recommend. Mr. Coleridge is, doubtless, partly right, but before he again ventures to reflect on the medical officers we trust that he will try the experiment of substituting bitters for beef at his own dinner. The physiological experiment will be much safer in his case than in that of a pauper, and after the experiment he will speak with more effect in reflecting on the medical officers.

THE NOTTINGHAM LUNATIC HOSPITAL.

WE are always glad to notice the yearly reports of this admirably conducted institution. Its increasing reputation nearly doubled the number of inmates during 1871—a result which added much to the responsibility, anxiety, and work entailed on the management. Dr. Tate again urges the importance of patients being subjected to treatment at an early stage—recoveries being rare in proportion to the progress of their malady. The general health of the asylum is greatly above the average of such institutions, the water being analysed and pronounced wholesome by Professor Frankland. So much are the advantages of the asylum in request that Dr. Tate urges the necessity of immediately enlarging its accommodation. This of course implies an addition to the number of servants, who are already in such force that neither restraint nor seclusion had to be practised during all the year, while cases of suicide or even serious accident were simply non-existent.

FIG-LEAVES.

IN the Indian collection at the International Exhibition, in a case of personal ornaments placed against the wall near the south-eastern angle of the court, may be observed a pair of silver leaves, exactly copied from the ovate leaves of the Indian fig-tree. In the same and in other cases will be found a variety of metal ornaments of the conventional heart shape, and others of the shape of the ecclesiastical piscina, attached to some form of cincture or girdle. All these variations of the leaf form are used by Hindoo girls to cover the vulva, and not seldom as their sole article of attire; while the heart and piscina forms are merely conven-

tional copies of the original. This relation between the conventional heart shape and the female sexual organs possibly explains the first use of the former as a symbol of love; and it may also fairly be assumed that the piscina was a heathen emblem, a relic of the phallic worship of some far back Aryan stock, before it was adopted as a Christian one. The young ladies who purchase valentines, and the architects who copy mediæval decoration, have probably been about equally ignorant of the meaning of the forms they have assisted to perpetuate. The Indian jewellery collection contains also objects of sanitary interest, in the shape of the thumb-rings, furnished with mirrors, which are worn by Hindoo women. These rings are used for the examination of the genitals, in order to secure that they are cleansed effectually.

FLOWERS FOR HOSPITALS.

WHO would not like to send flowers to hospitals? The appeal of Mary Stanley through a daily contemporary is most reasonable, and withal very subtle. It appeals both to one's love of flowers and one's love of the sick, two of our tenderest passions. Flowers exert an exquisite influence in sick rooms and hospitals, and are emphatically "an odour of a sweet smell" redolent of better times and sweeter air for invalids. Many who cannot visit the sick in our hospitals might send flowers, and all who can do so have only to communicate with Mary Stanley, 13, Hobart-place, Eaton-square, who will see to the right distribution of their gifts.

HARVEY TERCENTENARY MEMORIAL.

LAST year (Sept. 23rd), in drawing attention to the Harvey Tercentenary Memorial, we expressed our "approval of Folkestone as the site of the monument, always provided that the vicar does not get his way of spending the money on a handsome stained glass window." At the present time a card and circular, soliciting contributions towards a fund for such a window in the parish church of Folkestone, are being sent to members of the profession; but it should be stated that this appeal does not emanate from the committee formed at the meeting held at Folkestone on the 6th of September last.

The committee for carrying out the resolutions agreed to at that meeting have been offered the Hall of the College of Physicians for the purposes of a public meeting in London, which will be shortly organised, and particulars of which will be duly announced in these columns.

THE REPRESENTATIVE OF HANOVERIAN MILITARY SURGERY.

THE distinguished Hanoverian surgeon, whose address, delivered at St. Thomas's Hospital on Thursday afternoon, we have the privilege of presenting to our readers, has lately been staying at Netley. On Monday last Dr. Stromeyer was induced, at the request of the professors and others in authority at the Army Medical School, to give an address to the candidates and staff of the hospital, in which he detailed his campaigning experiences, and entered upon some of those surgical questions about which he and the distinguished Prussian surgeon, Von Langenbeck, have so much differed. Subsequently, Dr. Stromeyer was entertained at dinner at the mess of the Army Medical Service. Dr. Stromeyer studied in London in 1827. He is well acquainted with our literature, and speaks our language with only very slight difficulty. Few men can boast of an experience of military surgery equal to that of Stromeyer; and no one, therefore, deserves to be listened to with more respect.

THE TROOP-SHIP "MALABAR."

ON the arrival of the steamer *Malabar* in this country with invalids from India, the authorities, having been warned of the occurrence of some cases of small-pox during the voyage, wisely adopted precautions against the spread of that disease, not only among the troops, but among the civil population. Those invalids who did not require to proceed to Netley for medical treatment were temporarily accommodated, with their families, at Fort Monckton, Gosport, before being allowed to proceed to their various destinations. They have all been vaccinated, and the detachment will almost immediately evacuate the fort, if they have not already done so. The invalids that proceeded to Netley were isolated on arrival, and those suffering from small-pox were placed in tents. Some fresh cases have occurred among the invalids since their debarkation, but the disease has not extended beyond them.

THE BUXTON BATH HOSPITAL.

WE learn from the report presented at the annual meeting of subscribers to the Devonshire Hospital and Buxton Bath Charity that, during 1871, no fewer than 1318 patients were received, of whom 1116 derived benefit from the waters. By the recent addition of 20 beds, the whole accommodation for in-patients has been raised to 145 beds. The great utility of the Buxton waters in cases of chronic rheumatism is generally recognised by the profession; and it may be convenient to our readers to know that suitable poor applicants are admissible to the benefits of the charity on a payment of ten shillings per week. Buxton has recently been rendered much more accessible from the north by the opening of a branch of the Midland Railway from Manchester.

ROSCIUS VERSUS BACCHUS.

THE French Government, in view of reforming drunkenness in the navy, which has lately assumed very serious proportions, and which is attributed by the Minister of Marine to the absence of cheap amusement for the sailors when ashore, has entered into a correspondence with the lessees of seaport theatres, having for its object an arrangement by which sailors may enter such places of amusement for a merely nominal payment. We shall feel curious to learn the result of this experiment, which is certainly the first time that the drama has been called in to the aid of temperance. The project, which is peculiarly French assumes a greater amount of time at the disposal of Gallic sailors than is accorded to our own tars when in harbour.

M. HENRI DUNANT.

OUR readers probably may not be aware that the gentleman whose name stands at the head of this article, eleven years ago, took the initiative in originating the scheme for affording succour to the wounded in war. Soon after the Italian war M. Dunant published his work, "Un Souvenir de Solferino," which was subsequently translated into almost every European language, and may be considered as having given the great stimulus to the numerous societies since organised under the Red Cross of Geneva. M. Dunant, it is well known, made the most persevering efforts, travelling throughout Europe for several years, and sacrificing his private fortune to a great extent, to further his humane object. Adversity has since overtaken him, and a few of M. Dunant's friends have formed themselves into a committee in Paris for the purpose of drawing attention to his circumstances, and, if possible, of obtaining the means of relieving his misfortunes. Deputy Inspector-General

Dr. Gordon, C.B., now stationed at Dover, has kindly undertaken to receive and forward any contributions, and with this object he has been good enough to furnish us with a copy of a communication that has appeared on the subject in the daily journals.

THE PRINCESS OF WALES.

WE are able to say that there is no foundation whatever for the statement which has been publicly made that the Prince of Wales is likely to have an addition to his family towards the end of June. No such happy event is expected at present.

DR. LIVINGSTONE.

DR. CHRISTIE, physician to H.H. the Sultan of Zanzibar, and to the Universities' Mission, East Africa, writes as follows:—"The steamship *Abydos* which sails from here on April 15th, brought out the Livingstone Search Expedition, and I would not be at all surprised if before that date Mr. Stanley, of the *New York Herald*, should arrive at Zanzibar with intelligence concerning Dr. Livingstone. I may be wrong, but I am strongly of opinion that Mr. Stanley has anticipated the expedition, and that he has picked up the doctor at Ujiji. All those in Zanzibar who take an interest in the matter, and who investigate news from the far interior, believe that such is the case."

SMALL-POX PANIC AT WALSALL.

UNDER the influence of the small-pox panic at Walsall all sorts of things are being done which should have been done before. A special hospital is to be erected; a medical officer of health is to be appointed; apparatus for disinfection is to be procured; additional sanitary inspectors are to be appointed; the wages of men employed under the commissioners are to be increased. So costly a thing is the neglect of vaccination. The vaccinated die at the rate of six per cent.; the unvaccinated at the rate of fifty-three per cent.

BEER IN WORKHOUSES.

THE Leeds Board of Guardians have resolved to allow their aged inmates (over fifty years of age) half a pint of beer on four days of the week. Last year the board refused the allowance on the ground that drunkenness was thought to be one of the main causes of pauperism. Inquiry has shown that not more than one-tenth of the pauperism in the workhouse is due to excessive drinking. This alteration of the dietary will require the sanction of the Local Government Board, and we hope that Mr. Stansfeld will not find it necessary to refuse his sanction.

A MEETING of the Council of the Poor-law Medical Officers' Association, and of the Committee appointed last March to watch the progress of the Public Health Bill through the House, will be held at the Medical Club, 9, Spring-gardens, on Tuesday, May 28th, at 7.30 P.M., for the purpose of considering the amendments of the clauses relating to Poor-law medical relief.

ON Monday last, whilst the Dorset Volunteers were drilling near Dorchester, six members of the corps were suddenly prostrated by a lightning stroke. Two of them especially were found to be so severely scorched as to require to be conveyed home. At the same time the Blagdon monument and obelisk, in the centre of the drill ground, were struck by the electric fluid, and a tall flagstaff was split from top to bottom.

RECENT advices from Bombay state that the steamship *Otterburn* arrived at Aden at the beginning of last month in a miserable sanitary condition. She left Jedda with about 1000 pilgrims on board, her screw broke, and, having drifted about for nearly two months, the provisions and water were consumed; from two to three deaths occurred every day, and several of the crew were suffering from small-pox. The *Otterburn* is a steamship belonging to Hartlepool; and it is probable that the small-pox referred to was exported from this country. As our vessels trade to all parts and all countries, so we have succeeded in disseminating the seeds of the small-pox epidemic here, there, and everywhere, in common with other productions of these fertile islands. So much for sanitary science afloat.

THE retirement of three inspectors-general of the Army Medical Service will, it is anticipated, cause the promotion of Deputy Inspectors-General Fraser, Ker Innes, O'Flaherty, and Longmore. The promotion of the latter officer will be a special one, and will not lead to his vacating the Professorship of Military Surgery at Netley. The rumour that Dr. Balfour, F.R.S., the present head of the Statistical branch, is about to be promoted, is, to say the least, premature, seeing that there is no vacancy. Inspector-General Mouat was, by the latest mail, still in Bombay; and the reports of his having embarked for this country are therefore incorrect. There is reason to believe, however, that this officer will shortly return to England for the benefit of his health.

WE are glad to learn by the latest mail that the outbreak of cholera at Mhow has apparently terminated, and that the European troops at that station are now in their ordinary condition of health. Prompt and decisive measures were adopted by the medical and military authorities on the first appearance of the disease. There is every reason to believe that all danger of an epidemic has passed away.

THE old *Belleisle*, now lying at moorings in the Medway, is to be taken to Chatham and broken up. She has done good service as a hospital ship for many years, was moored off Deptford Creek in 1866 during the last epidemic of cholera, and was again occupied for some months by the patients of the Seamen's Hospital in 1869, which latter was the *finale* of a long period of usefulness.

M. CHENU, whose splendid statistical works respecting the wars in the Crimea and Italy are well known to all military surgeons, is on the eve of publishing a similar book on the wars of China, Cochin-China, and Mexico. The same author is now busy in collecting data touching the Franco-Prussian war.

IN recognition of the services rendered by Dr. G. V. Poore to the Princess Thyra of Denmark during her late attack of typhoid fever, His Majesty the King of Denmark has made him a Commander of the Order of the Danebrog.

THE number of convictions under the Vaccination Act of 1867, during the years 1868, 1869, and 1870, were as follows:—England and Wales, 1484; Scotland, 2; Ireland, 2859.

FROM a parliamentary report it appears that, during the past year, there were 100 deaths from starvation in the metropolis.

WE hear that the managers of the ball lately given in aid of the funds of King's College Hospital will be able to hand over nearly £400 to the treasurer.

THE Queen's Advocate and the Attorney-General in Ireland have just decided that Trinity College, Dublin, has been in error in requiring any religious test for the holding of a fellowship. By this decision, a Moravian native gentleman, who was a candidate at the recent examination, may be made a Fellow of Trinity College, Dublin.

MR. EDWIN CHADWICK, C.B., will read a paper at a meeting of the Health Department of the Social Science Association, to be held on Monday evening, the 27th inst., "On the Duties of Officers of Health and the Separation of Private Practice from the Public Medical Service." The chair will be taken at 8 o'clock.

IN the action at the instance of Miss Jex-Blake against the Senatus of the University of Edinburgh, application was made on Thursday, the 16th, to Lord Gifford to "sist procedure" as respected the Chancellor of the University, the Right Hon. John Inglis. The application, not being opposed, was at once granted.

THE sewer in Constantinople, to which we called attention at the time of the great prevalence of cholera in that city, is, we learn, to be covered over, and the work of covering in has, in fact, been commenced; the slaughter-houses, too, against which such bitter complaint was made, have, we hear, been closed.

IN accordance with a recommendation carried at the annual meeting in March last, a *conversazione* to the Fellows of the Royal Medical and Chirurgical Society and their friends will be held in the Society's rooms in Berners-street on Friday, June 7th.

THE latest advices from Calcutta mention the very great prevalence of jungle fever in the capital and its neighbourhood. Almost every household, it is stated, has been visited by the disease, the suffering from which is severe; but the attacks are seldom fatal.

RECENT news from St. Petersburg states that small-pox is becoming prevalent in that city. The chief of the police has thought it necessary to call attention publicly to the fact that infants are vaccinated gratuitously every Wednesday at the police ambulances.

THE Harveian Society has just presented Mr. J. B. Curgenven with a testimonial and purse of £20, in recognition of his efforts to procure legislation on the subjects of baby-farming and contagious diseases.

ON Tuesday H.R.H. Prince Arthur formally opened the New Southern Hospital, Liverpool. The building has 200 beds, and will cost £30,000.

DR. JOHN MURRAY has been appointed joint Lecturer with Dr. Cayley on Pathological Anatomy at the Middlesex Hospital. The authorities of the hospital have resolved to appoint a Lecturer on Psychological Medicine.

DR. HOFFMEISTER has left Cowes for Darmstadt, to be present at the confinement of Her Royal Highness the Princess Louis of Hesse.

MR. JOHN FOSTER is a candidate for the office of surgeon to the Cancer Hospital vacant by the death of Mr. Cooke.

THE total number of paupers in the metropolitan districts last week was 109,147.

Correspondence.

"Audi alteram partem."

THE WORCESTER INFIRMARY.

To the Editor of THE LANCET.

SIR,—When I sent to you a copy of the *Worcester Herald* containing my letter signed "Charity," I sent with it two or three lines only, saying I hoped, as the subject was an important one, that it would not be consigned to your waste-paper basket. I suppose I may, therefore, assume to myself the honour of being your "possible correspondent," as mentioned in the letter of Dr. Strange and Mr. Budd in to-day's LANCET. As in that letter some degree of untruthfulness is imputed towards me, I must beg the insertion of a brief reply to it.

In the first place, it states that "the number of physicians and surgeons on the staff was three of each." I say in my letter that "there were four physicians and three surgeons."

In the *Midland Medical and Surgical Reporter* of November, 1828, there is a long article on the Worcester General Infirmary, and, speaking of its foundation, it says "the names of Attwood, Mackenzie, Cameron, and Wall as physicians, and of Edwards, Russell, and Jeffreys as surgeons, must ever remain dear to the friends of humanity." And further on in the same article is the following:—"On the 29th November, 1750, the following advertisement, from the physicians of the infirmary, appears:—

'Worcester Infirmary, November 28th, 1750.

'We find that the horrible fits of epileptical patients taken into the infirmary are so dreadful and shocking to the other patients that they do not recover from their terror for a great while after seeing one of them. They also give so great a disturbance, especially when they happen in the night (for the whole ward is often employed in keeping epilepticks from hurting themselves) that the other patients cannot rest for them. We, therefore, hope that no gentleman or lady will recommend such in-patients for the future.—(Signed) J. Attwood, T. Cameron, J. Mackenzie, J. Wall.'"

Much of what is said in the letter of the staff concerning the admission of the profession to witness operations is a gross misrepresentation of facts, if not entirely false. I have been practising in the city and neighbourhood for upwards of fourteen years, and I say most positively that if there is a fixed day and hour for operating, I do not know which it is. I am not aware whether I am one of the "two" "confessedly" left out in the cold, having been present by invitation on one or two occasions (only), when a former patient of my own was the subject of operation. If I then unwittingly made myself personally disagreeable or obnoxious in any way I am quite ready to hear it. A considerable time ago I mentioned to each surgeon on the staff that, if not objectionable, I should be glad to witness their operations. Being doubtful of their acquiescence, I asked the then house-surgeon if he thought I should be welcome to attend, but I did not receive any assurance (but far otherwise) to that effect. Since then I have written to the committee (in which the staff is well represented) on several occasions, and the only reply I have ever received from them is the following:—

Worcester Infirmary, March 19th, 1872.

Dear Sir,—In separate cover, by this post, I return you a copy of THE LANCET, by the wish of Earl Beauchamp. His Lordship mentioned the substance of your letter to the Executive Committee at their meeting yesterday. If you will kindly read the sixty-first rule of the institution you will see that your desire is there provided for.

I am, dear Sir, yours faithfully,

Dr. Woodward, Worcester. ALFRED P. WATKINS, Sec.

Now, Sir, this rule states, "that the profession may be admitted by the honorary surgeons to witness the operations, with the concurrence of the operating surgeon." I need only mention that there is a wide difference between permission being given and action being taken. The existence of this rule makes the omission the more invidious.

Having now given my experience of the liberality of the infirmary staff, I hope that other local practitioners will do the same. I suggest that every medical man in the city and county be canvassed, and asked the question, how many times he has been invited, and attended to witness operations at the Worcester Infirmary; and I challenge the staff to that issue. In the meantime possibly they will kindly give the name and a rough estimate of the number of attendances of each medical man during the past twelve months.

I have in my possession a letter to the Executive Committee, dated April 16th, 1872, asking for less than what the staff now say is conceded. It was unfortunately sent in a day too late for the meeting, and has therefore not been read.

I do not complain of such a dainty dish as a case of ovariotomy being reserved for the county practitioners; but do think that men practising in the city should be free to witness ordinary cases, and be thus put more on a par with their brethren living in small towns, many of which now have their village hospitals open to the profession of the neighbourhood.

I have the honour to be, Sir,
Your most obedient servant,

Worcester, May 18th, 1872. WM. WOODWARD, M.D.

MECHANICAL RESTRAINT IN CASES OF INSANITY.

To the Editor of THE LANCET.

SIR,—I have perused with interest the letter from Dr. Yellowlees, on mechanical restraint in cases of insanity, which appeared in THE LANCET of May 18th. It appears to me that there are webs surrounding the question of non-restraint which require to be swept away, and that Dr. Yellowlees, in his able letter, has manfully endeavoured to do this by placing the question of restraint in its only true and proper light. The views on restraint and seclusion held by Dr. Yellowlees I have hitherto practised and fully endorse; and I believe with him that these moderate views are held by many medical officers of asylums. That the cases requiring restraint, for other than surgical reasons, are not of frequent occurrence, I fully admit. At Hanwell, with a population of about 1100 female patients, and during a period of seven years and a half, I found it necessary, after all other means failed, to employ mechanical restraint in two cases, and with benefit to the patients, each of whom exhibited suicidal, violent, and destructive propensities.

I have heard it admitted that restraint may be the best treatment in a particular case, but, for the sake of upholding a general principle, and to prevent its abuse, it is better to sacrifice that patient and deprive him of what is the best treatment in his case, and after all the most humane. This admission I think goes far to strengthen the ground taken up by Dr. Yellowlees, for I maintain that it is our duty to do what we believe to be best for each individual patient, and that we are not justified in depriving the patient of what will be a benefit to him, merely because the same treatment may be improperly resorted to and abused in other cases. In surgical cases the propriety of restraint is universally admitted. A patient cuts his throat; he is very restless, interferes with the wound, or tries still further to injure himself; and to keep him at rest, to prevent further mischief, and enable the wound to heal, restraint is applied. But, in this suicidal case, those holding extreme views would say, Don't apply restraint to prevent the suicidal act, but after the injury is inflicted you may apply restraint. I must confess I see neither logic nor reason in this. Prevention is better than cure. The highest aim and art of medicine is preventive, and, to my mind, it is as justifiable to apply restraint to prevent the suicidal act as to apply it after the injury is inflicted.

You seem to question the propriety of the Commissioners in Lunacy sanctioning, or at least not condemning, restraint. It is to be hoped they do not hold extreme opinions on this important question, but take a moderate and practical view of the matter.

The question of restraint, opened up by your remarks, is ripe for discussion; but, before any satisfactory settlement can be aimed at, it will be necessary to define what is meant by restraint and seclusion, because it may be found that all restraint is not termed restraint, but bears the more euphonious and more fashionable title of "medical treatment." The same with seclusion, which, to judge from the reports of the Commissioners in Lunacy, is not always registered as seclusion, but occasionally passes as "medical treatment," and escapes registration.

I am, Sir, your obedient servant,
J. MURRAY LINDSAY, M.D.,
Medical Superintendent.

Derby County Asylum, Mickleover, May 21st, 1872.

LONDON HOSPITAL.

To the Editor of THE LANCET.

SIR,—Instead of accepting my challenge to lay the facts, which you say you are in possession of, before your readers, in order to enable them to judge for themselves, you still persist in judging for them.

It is not to be expected that I should be otherwise than "irrepressible" under a judgment, the fairness of which I utterly deny; and which, so far as it has any weight, must foster an unjust prejudice against me, until the suppressed facts and statements upon which that judgment professes to be based are made known. Again, Mr. Rivington makes a statement which requires correction. He says Mr. Maunder "came forward with a written indictment against me, which had no evidence to support it but his own testimony, and which, as you stated with substantial accuracy, 'utterly broke down.'" This statement is, I repeat, untrue. The circumstances were known to the only other surgeon present, and Mr. Rivington is well aware that the inquiry did not "utterly break down." It was agreed that he should be strongly remonstrated with. I pass by for the present certain injurious expressions in your last article, as these may probably call for separate consideration. I content myself now with simply repeating my challenge to you and to Mr. Rivington, to publish the entire history of the matter, and to submit the whole case to impartial arbitration.

I am, &c.,
C. F. MAUNDER,
Surgeon to the London Hospital.

May 21st, 1872.

To the Editor of THE LANCET.

SIR,—As a former student of the London Hospital, I take a deep interest in the unfortunate dispute which is now going on between some members of the staff, and I venture to suggest that, as the affair has already been made so public, it would be well to publish a detailed account of the case and operation which have given rise to the reference to the "lay authorities," and of the other cases &c. which have been referred to.

This would be a step of which Mr. Maunder could hardly complain, and one evidently consonant with Mr. Rivington's feelings, for he distinctly asks to be furnished with a copy of the document written for the House Committee by Mr. Maunder, and presumably containing details of these cases.

The profession would then be in a position to judge whether there were grounds to justify so important a step as that taken by Mr. Maunder.

I am, Sir, yours, &c.,
J. R. B. DOVE.

Pinner, Middlesex, May 21st, 1872.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

THE Committee of the House of Commons have declared that the preamble of the Sewerage Bill presented by the Corporation of Birmingham is proved, but have introduced some alterations of an important character. Waterclosets are to be retained, and are not to be specially taxed; the sewage is to be defæcated by chemical processes before being applied to the land, and all the depositing tanks are to be covered in. These modifications will entail a great cost to the town, and their intention is not very obvious.

Small-pox is gone from Wolverhampton, but at Walsall

it is making great havoc. Dr. Ballard has visited the town and made some recommendations to the authorities on sanitary matters which they will do well to adopt without delay. Mr. Palmer, one of the union medical officers, reports that, "filthy accumulations often prevail by the dwellings of the miserable poor"; that ash-pits are full to overflowing, and that hence fever and small-pox must be expected, unless scavengers and tumbrils are at once set to work to remove these nuisances.

The Town Council of Birmingham have again deferred the important question of the appointment of a medical officer of health.

The sum of £3000 left to the charities of Birmingham is thus to be disposed of: to the General and Queen's Hospitals, each £1000; and the remaining £1000 in certain proportion, according to the plan adopted by the committee who distribute the annual collections from the various places of worship.

The laying of the foundation-stone of the Middle-class Idiot Asylum passed off with great *éclat*. The Marquis of Ripon unfortunately was unable to perform the ceremony, but his place was taken by Lord Leigh, and the appeal made by the Committee resulted in the addition of upwards of £1000 to the funds of the charity.

During the past week the following operations have been performed at the General Hospital:—Lithotomy, in a boy aged nine years, by Mr. Baker. Removal of an adenoid tumour of the breast, and of a large syphilitic sarcocele, by Mr. Pemberton; and transfusion by Mr. Bennett May, the house-surgeon. The patient, into whose arm eight ounces of blood were injected, rallied somewhat after the operation, but died within twelve hours.

At the Queen's Hospital, ovariotomy has been performed by Mr. Clay; the cyst was multilocular and of large size. Adhesions were divided by Clay's cautery, and the pedicle secured outside the wound by Spencer Wells's clamp. Mr. West excised an eyeball, and removed an osteoma of the upper jaw; and Mr. Jordan operated for vesico-vaginal fistula, and for anchylosis of the knee-joint.

A complimentary address was presented, and a farewell supper given to Dr. Underhill, on resigning the office of house-physician to the Queen's Hospital, on the 17th instant, when a large number of the present and former students of that institution expressed their warm regard for Dr. Underhill, and their regret at his early retirement from office.

Birmingham, May 18th, 1872.

Obituary.

L. C. SPENCER, M.D., F.R.C.S.

AN able and benevolent practitioner has been lost to Preston and its neighbourhood in Dr. Lawrence Catlow Spencer. The deceased gentleman was born at Burnley in October, 1811, and, when only thirteen years of age, was apprenticed to the late Mr. John Gilbertson of Preston. His medical studies were continued at Guy's, and in 1834 he took the diploma of the Royal College of Surgeons and the licentiateship of the Apothecaries' Company. In the following year he settled as a practitioner in Preston, and soon rose to popularity and affluence. In 1854 he became a Fellow of the Royal College of Surgeons; in 1859 Licentiate (by examination) of the Edinburgh College of Physicians, and in 1860 Doctor of Medicine of Aberdeen University. The respect which he commanded in Preston secured for him, in 1857, the post of alderman, which he held up to the time of his death; while in 1857–58, and again in 1870–71, he was mayor of the town. According to the local journal he was a very public-spirited citizen, and Preston owes to him its improved system of water-supply—a sanitary necessity for which he held himself responsible, and which he laboured hard to provide. Throughout all North Lancashire his loss is deeply deplored, especially by the poor, to whom he was a friend indeed. His premature decease was due to over-exertion, but its proximate cause was erysipelas, which he caught (it is supposed) from a patient whom he was treating for that disease. Dr. Spencer was a widower, and leaves four sons and two daughters. The eldest son is a surgeon in Preston; the second, a solicitor there; the third, the first Miller Exhibitioner at Cambridge; and the fourth, a medical student in town.

DR. WALTER TAYLOR,

(NORTH SHIELDS.)

ON the 20th April last, at his residence, Newcastle-street, North Shields, in the seventy-fourth year of his age, Dr. Walter Taylor departed this life. The doctor was born and educated in North Shields, and was there apprenticed to Mr. Patrick Watson, surgeon. On the termination of his apprenticeship he entered as a pupil of the Newcastle Infirmary, and thence proceeded to the University of Edinburgh, where he matriculated and qualified for the certificate of the Society of Apothecaries. Shortly after receiving this certificate he was elected medical officer to the Public Dispensary, founded by his master, and whilst he conscientiously performed the duties of his office he gained the respect and confidence of both patrons and patients. After holding this office a few years he commenced private practice. It was not until pretty well advanced in life that he attained the licentiateship of the Royal College of Physicians, Edinburgh. He was always a physically delicate man, and some years before his death, finding his state of health inadequate to contend with the toils of the profession, he relinquished practice to enjoy, as a private gentleman, the moderate competency he had gained by exemplary prudence and industry. The doctor was a fine type of the respectable general practitioner, kind and genial in his bearing towards his patients, punctual as clockwork in all his engagements, and true to the canons of medical ethics, which he held as a sacred inheritance.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the ordinary meeting of the Council on the 13th inst. the usual resolutions with respect to the meeting of the Fellows to be held on Thursday, the 4th of July next, for the election of members of the Council, were adopted. The President reported that the permission of the Senate of the University of London had been given to the College to hold the preliminary examinations in June and December next in the rooms of the University.

The following Members of the College passed the required examination and were admitted Licentiates in Midwifery at a meeting of the Board of Examiners on the 22nd inst.:—

Bland, Geo., Macclesfield; diplom. memb. dated Jan. 1872.
Parkes, William Edward, Gen. Hosp. Birm.; April, 1872.

The following gentlemen passed the first part of the Professional Examination for the Fellowship of the College at meetings of the Court of Examiners on Monday, Tuesday, and Wednesday last:—

H. Ashby, W. H. A. Jacobson, G. Snell, F. J. M. Palmer, F. T. Paul, S. H. Vines, W. Stericker, H. Heiley, A. A. Thomas, and H. K. M'Kay, Guy's Hospital; W. L. Webber, J. Adams, C. E. Harrison, T. H. Sawtell, H. B. Vincent, E. Tootel, R. S. Greensill, H. A. A. Nicholls, P. de H. Haigh, H. J. Bott, W. Odell, and T. Sympson, St. Bartholomew's Hospital; H. G. Jamieson, R. Colgate, W. B. Houghton, E. G. Whittle, and G. B. Browne, University College; R. J. Anderson, Belfast; F. Chaffers, G. E. Wherry, and C. W. Owen, St. Thomas's Hospital; B. M. Schlesinger and E. B. Owen, St. Mary's Hosp.; A. Gibbings and E. W. White, King's College.

Of the 55 candidates examined on the above days, 20 failed to satisfy the Court, and were referred to their anatomical and physiological studies for a period of six months. For the final examination for the Fellowship, which commenced on the 23rd inst., there are 17 candidates.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 16th inst.:—

Davies, John Hopkyn, Lampeter, South Wales.
Maberley, Frederick Herbert, Birmingham.
Murphy, Robert William, Hobart Town, Tasmania.
Murrell, Clement Frederick Fenn, Great Yarmouth.

As Assistants in Compounding and Dispensing Medicines:—

Barnes, Edward, Hilsea, Portsmouth.
Cowley, Henry Williamson, Nottingham.
Russell, Matthew, Whitehaven.
Tansley, Arthur James, Stone, Staffordshire.
Turner, Joseph Kitchin, Whitehaven.

MRS. BATES, the giantess, was recently delivered of a dead female child weighing 18 lb.

Small-pox is still increasing in Birmingham, the last report giving a total of 1509 cases in the town, as compared with 1458 in the previous week.

AT a recent meeting of the Royal College of Surgeons in Ireland, the following gentlemen were appointed examiners for the ensuing year:—Messrs. Fleming, Stapleton, Richardson, Stoker, Tufnell, Barker O'Grady, Cronyn, Kirkpatrick, and Roe.

GAROTTING has lately become very prevalent in Dublin. A short time since, Mr. Kirkpatrick, the President elect of the College of Surgeons, whilst going out to visit a patient about 11 P.M., was attacked by two men, who rendered him insensible and robbed him of his watch and purse.

BOOTLE NEW BOROUGH HOSPITAL.—Medical Staff: Hon. Physician — George Charles Walker, M.D. Hon. Surgeons — Robert J. Sprakeling, M.R.C.S. Eng., L.S.A. Lond.; Stewart McNicol, L.R.C.S. Edin. and L.M.; and Richard V. Clampitt, L.R.C.P. Edin., L.R.C.S. Edin. House-Surgeon—Thomas M. Wills, L.K.Q.C.P. Irel. and L.M., L.R.C.S. Irel.

PRESENTATIONS. — R. F. Dill, M.D., of Belfast, Consulting Physician to the Belfast General Hospital, and Coroner for the town, who was recently subjected to a personal outrage from which he is slowly recovering, has just been presented by his numerous friends with a brougham, car, horse, and harness, accompanied by a complimentary address. At the same time, Mrs. Dill was presented with valuable plate and jewellery.——The Rev. Charles Clouston, LL.D., L.R.C.S.Ed., of Sandwick, was recently presented by his parishioners with a handsome tea and coffee service.——Dr. Cocks, of Dundee, after being in practice for nearly forty years, and in the contemplation of retirement from general practice, has been presented with very handsome expressions of the esteem and gratitude of his patients in the form of various articles of vertu of great beauty and value.

Medical Appointments.

ANDERSON, W., Surgeon R.N. (of Bowling), has been appointed Medical Officer for the Parish of Kilmaurs, Ayrshire, vice A. Galloway, M.D., resigned.

BARRETT, R., M.D., L.R.C.S.Ed., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Kilcullen Dispensary District of the Naas Union, Co. Kildare, vice R. C. Carter, L.R.C.S.I., resigned.

BETTS, J., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for District No. 4 of the Malmesbury Union, Wilts, vice Edwin Smith, M.R.C.S.E., deceased.

BOSTOCK, A. S., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the united Districts of Boxgrove and Rumboldswhyke in the Westhampnett Union.

BRUNTON, W. R., M.R.C.S.E., has been appointed Medical Officer for the Tamworth District and the Workhouse of the Tamworth Union, vice E. Calloway, M.R.C.S.E., resigned.

EAGER, T. C., L.R.C.P.Ed., M.R.C.S.E., L.M., has been appointed Medical Officer to the Ancient Order of Foresters, Sutton, Friendly Society, and True Blue Benefit Society, Woking, vice H. Tofts, M.D., M.R.C.S.E., deceased.

FENN, E. L., M.B., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Attendant for Out-patients of the Infirmary, Richmond, Surrey, vice W. A. F. Bateman, M.R.C.S.E., resigned.

HAINES, A. H., M.R.C.S.E., has been elected Medical Officer for the Long Sutton and Sutton-bridge Districts of the Holbeach Union, Lincolnshire, vice A. Ewen, M.R.C.S.E., resigned.

JACKMAN, R. H., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Holycross Dispensary District of the Thurles Union, Co. Tipperary, vice Barry, appointed to the Littleton Dispensary District.

JACKSON, G. E. G., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Western District of the Westminster Union.

JEFFERISS, W. R. S., M.B., C.M., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Parish of Evie, Orkney.

KENYON, G. A., M.B., L.R.C.P.L., M.R.C.S.E., has been appointed Assistant Medical Officer at the Crumpsall Workhouse, Manchester.

KERR, W. S., M.D., L.R.C.S.Ed., has been appointed a Surgeon to the Dumfries and Galloway Royal Infirmary, vice Alexander Borthwick, M.D., L.R.C.S.Ed., resigned.

LINDSAY, J. M., L.F.P. & S. Glas., has been appointed Medical Officer and Public Vaccinator for the Parish of Kirkmaiden, Wigtonshire, vice Trotter, resigned.

M'DOWELL, C. W., M.B., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Carlow Dispensary District of the Carlow Union, vice S. J. O'Connor, L.K.Q.C.P.I., retired.

MACRAE, G., M.B., C.M., has been appointed Parochial Medical Officer for Ardnamurchan, Argyleshire, vice Roderick Macdonald, L.R.C.P.Ed., L.R.C.S.Ed., resigned.

MALLAM, Mr. G., has been appointed Hon. Dental Surgeon to the Westbourne Provident Dispensary and Maternity, Queen's-road, Bayswater, vice J. Blencowe Simons, L.D.S. R.C.S.E., deceased.

NEDLEY, T., M.D., L.K.Q.C.P.I. (Physician to the Lord-Lieutenant, &c.), has been appointed Medical Attendant at the Training Department of the Commissioners of National Education, Ireland, vice J. D. M'Cready, F.K.Q.C.P.I., resigned.

O'BRIEN, P. C., M.D., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Askeaton Dispensary District of the Rathkeale Union, Co. Limerick, vice Murphy, resigned.

O'CONNOR, D. W., M.D., L.R.C.S.Ed., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Ardmore Dispensary District of the Youghal Union, Co. Cork, vice Wm. C. Poole, M.B., L.R.C.S.I., resigned.

PATERSON, W. H., M.D., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Broughton District of the Glanford Brigg Union, vice R. H. Paterson, L.R.C.S.Ed., deceased.

PERCIVAL, G. H., M.R.C.S.E., has been appointed Assistant Medical Officer to the Salop and Montgomery Counties and Wenlock Borough Lunatic Asylum, vice W. Davies, M.R.C.S.E., resigned.

PROVIS, W., L.R.C.P.P.Ed., L.M., M.R.C.S.E., has been appointed Medical Officer for District No. 2 of the Mere Union, Wilts, vice W. N. Marshall, M.R.C.S.E., resigned.

RAWSON, E. A., M.B., C.M., L.R.C.S.I., has been appointed Medical Officer to the Carlow Union Fever Infirmary, Carlow, vice S. John Conner, L.K.Q.C.P.I., L.R.C.S.I., whose appointment has expired.

ROWLANDS, J. D., M.R.C.S.E., has been appointed a Visiting Surgeon to the Carmarthenshire Infirmary, Carmarthen.

THOMSON, A., M.D., L.F.P. & S. Glas., has been appointed a Physician to the Dumfries and Galloway Royal Infirmary, vice W. Smith Kerr, M.D., L.R.C.S.Ed., resigned.

TURNER, J. E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Headford Dispensary District of the Tuam Union, Co. Galway.

WATKINS, D. R., M.R.C.S.E., L.M., has been appointed a Visiting Surgeon to the Carmarthenshire Infirmary, Carmarthen.

WHITE, J. G., M.D., M.R.C.S.E., has been elected Honorary Surgeon to the Bournemouth General Dispensary and Cottage Hospital.

WHITE, W., L.K.Q.C.P.I., L.M., L.R.C.S.I., has been appointed Medical Officer for the Celbridge Dispensary District of the Celbridge Union, Co. Kildare, vice F. L. Graham, L.K.Q.C.P.I., L.R.C.S.I., deceased.

WILSON, W., M.D., L.K.Q.C.P.I., has been appointed Medical Officer of the Burt Dispensary District of the Londonderry Union.

Births, Marriages, and Deaths.

BIRTHS.

BANKART.—On the 19th inst., at Southernhay, Exeter, the wife of James Bankart, M.B., of a daughter.

BARNES.—On the 18th inst., at Dorset House, Ewell, the wife of G. E. Barnes, M.D., of a daughter.

CHARLTON.—On the 17th inst., at Fareham, the wife of E. Charlton, M.D., of a daughter.

ELLERY.—On the 16th inst., at Ridgway, Plympton, Devon, the wife of R. Ellery, L.R.C.P.Ed., M.R.C.S.E., of a daughter.

HUTCHINGS.—On the 16th inst., at St. George's-place, Canterbury, the wife of Henry E. Hutchings, M.R.C.S.E., of a daughter.

MACLEAN.—On the 9th inst., at Swindon, the wife of T. Campbell Maclean, M.B., C.M., of a daughter.

PATERSON.—On the 17th ult., at Bahia, Brazil, the wife of A. Paterson, M.D., of a son.

THOROWGOOD.—On the 19th inst., at Welbeck-street, Cavendish-square, the wife of John Thorowgood, M.D., of a son.

WILBE.—On the 19th inst., at York Lodge, Finchley-road, the wife of R. Haydock Wilbe, M.D., of a son.

MARRIAGES.

MABERLY—DENING.—On the 8th inst., at Trinity Church, Great Malvern, Frederick Herbert Maberly, M.R.C.S.E., L.R.C.P.Ed., of the Crescent, Birmingham, to Elizabeth Salter, third daughter of the late John Dening, Esq., of Pitt, Ottery St. Mary, Devon.

MCCULLOCH—RAMAGE.—On the 30th ult., at Stoke Church, John McCulloch, M.D., son of the Rev. Dr. McCulloch, of the West Parish of Greenock, to Louise, daughter of T. M. Ramage, Esq., R.N., of Earlsacre.

MERCER—MORGAN.—On the 10th ult., at Queenstown, N. G. Mercer, M.D., Medical Superintendent of the East Riding Lunatic Asylum, Beverley, to Sarah, eldest daughter of M. Morgan, Esq., of Queenstown.

DEATHS.

ATKINSON.—On the 10th inst., at Ballina, R. Atkinson, L.R.C.S.Ed., late Surgeon 17th Regiment, aged 44.

CARSE.—On the 10th inst., E. A. Carse, L.R.C.P.Ed., of Westonzoyland, aged 32.

FAWCUS.—On the 15th inst., H. R. Fawcus, M.D., of Flodden Lodge, Ford, Northumberland, aged 32.

HEWER.—At San Francisco, Wm. Hewer, L.R.C.S.Ed., formerly of Exeter, aged 84.

JACKSON.—On the 14th inst., at Portobello, Edinburgh, P. N. Jackson, M.R.C.S.E., Surgeon Scots Greys, aged 43.

JOHNSON.—On the 15th ult., at Charlottetown, Prince Edward Island, the Hon. Henry A. Johnson, M.D., formerly of Louth, aged 82.

MARSHALL.—On the 18th ult., off Sierra Leone, on board the Steamer "Calabar," S. H. Marshall, L.F.P. & S. Glas., late of the 2nd Regiment.

PORTER.—On the 15th inst., at the Fever Hospital and House of Recovery, Cork-street, Dublin, R. H. Porter, L.A.H. Dub., Resident Medical Officer, aged 24.

SMITH.—On the 12th inst., at Albert-road, North Woolwich, Essex, Percy James Rees Smith, late Student at the London Hospital, aged 26, after three days' illness; married seven weeks. Deeply mourned by all who knew him.

Medical Diary of the Week.

Monday, May 27.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, May 28.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. Edward B. Tylor, "On the Development of Belief and Custom amongst the Lower Races of Mankind."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Sir W. Gull, Bart., and Dr. Sutton, "On the Pathology of the Morbid State commonly called Chronic Bright's Disease, with Contracted Kidney."

Wednesday, May 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2 P.M.
CANCER HOSPITAL.—Operations, 3 P.M.

Thursday, May 30.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Tyndall, "On Heat and Light."
LONDON INSTITUTION (Finsbury-circus).—7½ P.M. Mr. Walter Noel Hartley: "Experimental Evidence against the Spontaneous Generation of Living Things."

Friday, May 31.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—9 P.M. Mr. E. J. Poynter, "On Old and New Art."

Saturday, June 1.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Roscoe, "On the Chemical Action of Light."

Notes, Short Comments, and Answers to Correspondents.

DEGREE-MANUFACTURE IN GERMANY.

THE medical is not the only profession that has to complain of the facilities afforded by Germany for irregular graduation. According to an official document, signed by the greatest of living Hebraists, Professor Ewald, of Göttingen, any unlettered person, be he cobbler, tailor, or tinker, if only engaged in a school, and having £10 *5s.* at command, may, with the help of a friend or hired agent who can write a little Latin, come out as Ph.D. even in the semi-respectable Göttingen or the non-respectable Marburg and Giessen. In these latter "seats of learning" and academical larceny, degree-giving is quite an industry, of the kind to which the French usually prefix "chevalier." Ph.D. is held to be equivalent to the M.A. of our British Universities, and hence it has often been the practice of those among ourselves who want to get on "by degrees" to graduate at one or other of the German schools on the above easy terms, and then quietly to substitute for the slightly shady Ph.D. the highly respectable English equivalent, or sometimes, indeed, to affix both together to their names. Practitioners who designate themselves in print and on door-plate as "doctor," when they only possess a non-university diploma, are quite capable of this little bit of "smartness."

A Subscriber.—No. The London College expressly forbids such a practice.

CHOLERA IN CHINA.

UNDER the names of *Shu-ching* and *Hoh-lan-ching* several forms of choleraic diseases have been long met with in China, quite distinct from the "plagues" which have for ages existed in that populous country. "Sudden and violent attack of vomiting and purging," "twisting of the guts," "grinding of the feet," "drawing up of the feet," "dry cholera" (in which there is no expulsion of the contents of the belly), and many other translations of terms met with in Chinese works, might be given. The term *Hoh* denotes the "suddenness" of these attacks, and the character *Lan* the "distress" which marks this terrible disease. The word *Shu* primarily means "sand," and may be intended to suggest the idea of the presence of some irritating matter in the *prima via*, causing much pain. Great numbers of the people in large towns often die off in these epidemics, which are generally local and simultaneous. Mr. Wylie found as many as eighty dying per day in Ching-tu, the capital of the large province of Sechuen, in the year 1868. The natives soon succumb to the disease, except in some few cases where they die from the consecutive fever only a little later. The first reliable record of a spreading epidemic of Asiatic cholera points to the year 1820, when a Fuhkien junk returning from Siam introduced the disease in its most violent form. Thence it spread to Canton, Kiangsi and Chehkiang provinces, where it made fearful ravages. Subsequently it went northwards to the metropolitan province of Pehchihli, where it fell lightly upon the people. It appeared annually in the prefecture of Ningpo for three years. It reappeared there in 1831 and 1841, according to Milne. From the dismay which this epidemic caused amongst the people it may be inferred that their own naturalised form of the disease is much milder; in fact, many of the cases seen have been summer cholera. Drinks of tepid water containing salt, infusions of labiate plants and of umbelliferous or piperaceous drugs, and the extravasation or actual escape of blood by irritating or puncturing the skin of the neck or back, are samples of the remedies resorted to by the Chinese practitioners, who meet with as little success as their Western brethren in severe cases.

Despised.—Our correspondent can surely apprehend the objections that may be urged; but "honi soit qui mal y pense."

DIETETIC THERAPEUTICS.

To the Editor of THE LANCET.

SIR,—For some time past I have been prescribing the Aylesbury condensed milk with cocoa in hermetically sealed tinned canisters. The conditions of disease in which I prescribe it are those of critical or protracted convalescence from parturition, fever, and surgical operations; also in various atrophic and cachectic states, the results of dyspepsia, dentition, tuberculosis, ague, diabetes, Bright's disease, hæmorrhage, diarrhœa, &c. In many cases it is equal to cod-liver oil with quinine, and has the advantage of being taken with pleasure, instead of with reluctance and loathing. There is no occasion to dilute it to any great extent. It may be eaten as it is without inconvenience, in the same way as Agnew's cod-liver oil jelly or any other confection or preserve. For the few people who do not like cocoa I substitute the condensed milk (without cocoa), stirred in plain coffee or tea. Fry's condensed cocoa and milk is, I presume, as good as that of the Aylesbury Company; but it is inconveniently solid, and not so agreeable in taste. As the manufacturers of these articles become more numerous, it will probably become necessary to exercise a jealous analytical vigilance over their products to prevent sophistication and fraud. At present, however, these invaluable preparations by the makers I have named are invariably genuine. The essential part of the process appears to be to saturate the original milk with sugar, probably with some amount of previous evaporation in vacuo. These preparations are cheap luxuries, suitable alike for the rich and poor, the invalid and healthy, the young and the aged.

I am sorry I cannot conscientiously extol "solid extract of meat." Chemically it is, doubtless, perfection; but for some reason or another it does not answer its intended purpose. I must admit that I commenced the prescription of it with a liberal prejudice in its favour, and it was only the repeated negative results of pure experience and observation that obliged me to give it up.

I am, Sir, yours, &c.,
Holloway, May, 1872. W. J. MARSH, M.R.C.S.

ERRATA.—In my paper on the "Use of Glycerine in Pharmacy," published in your journal of May 18th, p. 680, I find it stated that glycerinum dilutum consists of equal volumes of glycerine and distilled water. The formula should have been—glycerine, 2; water, 1. The error was, doubtless, my own. I cannot say whether equal volumes would be so satisfactory as a preservative; probably not. Also, in the last line but one, for "extract of pure gum," read "extract *or* pure gum."

DYER *v.* THE ST. PANCRAS GUARDIANS APPEAL FUND.

Dr. Bathurst Woodman sends us a list of additional subscriptions to this Fund, amounting to £20 odd, and requests us to state that the list will be closed at the end of June.

Mr. Scott Jones.—We cannot tell whence Messrs. Lotts get their information. They are generally right, and we think are right in this instance.

POPULAR COOKERY.

To the Editor of THE LANCET.

SIR,—You will save me much trouble and some expense by stating in your next number that the "Popular Cookery" referred to in my letter is (or was) printed for private and gratuitous circulation by A. Ireland & Co., Printers, Pall-mall, Manchester; and that the "Rules for the Management of Infants," published by the Obstetrical Society of London, can be got at Longman's, Paternoster-row, price 1*d.*

I am, Sir, yours truly,
D. HOOPER, M.B.,
Physician to the Surrey Dispensary.

Trinity-square, S.E., May 20th, 1872.

PURIFICATION OF GAS.

A RUMOUR, which, if well founded, is of ill omen to those whose duties or pleasures are not restricted to the average twelve hours of daylight, has been promulgated by the *City Press*. It is to the effect that the office of gas referee, created by the City of London Gas Act of 1868, is about to be abolished. As no penalty against a delinquent Gas Company can be enforced under the Act without the production of evidence by the gas referee to prove that the testing stations and apparatus were duly certified and in proper order when an alleged offence was committed, the effect of the abolition in question would be simply to deprive the public of the protection, in the matter of gas purification, which the statute was principally designed to afford. One would have imagined that the important disclosures contained in the first Report of the Gas Referees to the Board of Trade, published in July, 1870, would have proved to all reasonable men the necessity of some supervision, as to the purity of an article in general use, such as that supplied by the institution of the office now, it would appear, about to be suppressed.

M.D. Lond., who has forwarded a communication about Mr. Stansfeld's Public Health Bill, has omitted to enclose his card.

A CHAPTER IN THE HISTORY OF CHOLERA.

To the Editor of THE LANCET.

SIR,—Justice to the Historical Society induces me to request the insertion of these lines. In noticing my paper read before this Society, you charge me with wilfully mystifying, and either poking fun at or making a cat's-paw of it; for "we," you say, "can conceive the amusement of the author, as, without a dread of immediate detection, and with serious aspect, he 'chaffed' the learned members of the Society on a subject entirely beyond the range of their special studies." Now, as a Fellow of the Society, it is not likely that I would dare act in such a way, were I capable of it—a Society of which the late Mr. Grote was President, whose place is now filled by Earl Russell, and which numbers among its members many of the most distinguished scholars.

My paper was sent in to the Council and accepted some weeks before it was read, and, with the exception of that part which treats of the connexion between cholera epidemics and sun-spots, was substantially the same as that accepted by the Russian Academy, and by them referred to the Medical Council of the Minister of the Interior, and the same as that which you have been pleased to style "arrant nonsense."

You quote me as saying that the cholera-streams move in a "south-west" direction from their "homes." I said north-west. I said, too, that cholera was connected with auroral displays, not "annual" displays; also that cholera epidemics have a period equal to a period and a half of sun-spots, not "some" spots.

Now, I believe the subject was an eminently suitable one to be placed before the Historical Society; for I took the bare facts of cholera (which I had collected largely from the pages of THE LANCET for the last forty or fifty years, and for which I owe you a debt of deep gratitude), and with date and map showed how they were related to each other, therein giving them a history.

You ridicule my placing two cholera "homes" in the ocean. But as I believe cholera is in the atmosphere, what does it matter whether land or sea be at the place on the globe which I call the "home"? To those who hold that cholera springs from the soil, my idea is, of course, absurd.

I do not use the word cholera in any sense different from that in which medical men use it. Cholera, as I understand it, is an epidemic disease which appeared originally in India, and manifested itself to an unprecedented extent in 1817, extending chiefly in a north-west direction to Europe. After some years it broke out at other centres, and spread in a similar direction. I believe I know what is meant—at any rate what I mean—by the term "cholera epidemic," that is, the period during which a particular outbreak of cholera is in progress, not including regional outbursts.

I did not intimate that, if the Society gave me occasion, I would take them boldly into the wide question of the cosmical relations of the disease. I have no doubt they would, were that their province. The further consideration on this point I have, however, finished and despatched to the so-called barbarian.

Herein I differ from medical men: they believe that they can by quarantine and other regulations keep out cholera; I believe that this is impossible, since cholera (or that which produces cholera) is in the atmosphere. But I would by no means have anyone infer that I despise the taking such precautions as will keep the blood in a healthy state, so that when that which produces the disease enters the blood it may find an uncongenial soil and die.

I hope to merit that "much honour from epidemiologists" which you hold out. In the meantime, should any of your readers wish to know further of this matter, I must refer them to your contemporary *Nature* of May 9th, where they will find a full abstract.

I am, Sir, your obedient servant,

May 20th, 1872. B. G. JENKINS.

*** The Russian Academy, by referring Mr. Jenkins's paper to the Medical Council of the Minister of the Interior, obviously held, as we hold, that the subject of his paper, or the mode in which he dealt with it, was neither historical nor physical, but medical; and the Academy, using a discretion which the Historical Society might very well have copied without derogation of its learning, referred the paper to a Medical Board. If Mr. Jenkins and the Historical Society had discussed the value of the facts which pass for history in accounts of cholera, in the same fashion as the Society deals with facts relating to the history of states or nations, we should have been greatly obliged to them. Mr. Jenkins, however, according to the abstract of his paper, simply dealt with the history of cholera, so far as such history appeared to support a peculiar hypothesis. His paper was a contribution to epidemiology, not to history; hence the incongruity, in our opinion, of its being read before the Historical Society.—ED. L.

THE RATCLIFF CRÈCHE.

THE first year's Report of this excellent institution gives some interesting details relative to the working of these day nurseries, which sufficiently demonstrate their usefulness in the case of poor women, with young families, who require to go out to their daily work, like charwomen for example. Far more real and practical good might be effected in this way than by all the noisy advocacy of women's rights in the world. Mrs. Hilton's crèche receives babies for twopence a day, where they are well fed and properly cared for, and, in the case of older children, instructed. The average attendance is 65. The mothers deposit their children in the morning, and call for them in the evening. The children are supplied with toys, and efforts are made to amuse and train them to cleanly and industrious habits. Altogether the utility of such institutions in populous and poor neighbourhoods cannot be overrated, and those who undertake the charge of them well merit gratitude for their unostentatious labours in behalf of the poorer classes.

Mr. George Knapton.—Of course he must pay the toll that can be legally demanded.

ACTION OF CHLORAL AND OPIUM.

To the Editor of THE LANCET.

SIR,—The account which I read in the last number of your journal of a man who died a few hours after taking simultaneously a dose of chloral and one of tincture of opium interested me much, and the following case which occurred in my own practice appears to bear on the question.

About two months ago I was called to a man, aged thirty-five, in his second attack of delirium tremens. He was of strong constitution, though an old soaker. He had been restless and ailing and drinking copiously for a fortnight, and for seven or eight days before I was called in he had had no sleep. The symptoms of delirium tremens appeared the day before I saw him, and in the night he had been violent. It was an ordinary medium case. He had illusions, and was very excitable and restless. Pulse 108, moderate; temperature 101°; skin and tongue moist. Now, I have almost always found that in delirium tremens occurring in a young and not utterly broken-down subject, if you can produce by any means sound sleep, when the patient awakes the symptoms of delirium tremens will be gone completely, and only prostration remain. For this purpose I know of nothing better than chloral; so I ordered a mixture containing ten grains to the dose, to be given every hour until sleep was produced. However, contrary to my experience, the chloral produced almost no effect; so after he had taken 120 grains I stopped it, his symptoms being unchanged. I then prescribed a mixture containing half a grain of hydrochlorate of morphia to the dose every hour until sleep was produced. After the second dose he fell into a sound sleep; but awaking about 2 A.M., another dose was given, and he again slept. Towards morning his sister noticed that he snored loudly, and about 8 A.M. she observed that a change had come over him. She said "he was quite pale, and of a dark colour around the mouth and eyes, and that his forehead was covered with cold sweat." She awoke him without difficulty, and he answered questions and talked sensibly. Directly afterwards he fell asleep again, and died about 9 A.M. I saw the body about 10 A.M. It was very pale and cold, looking very much like the body of one who had died of hæmorrhage. No autopsy.

Yours truly,

May 15th, 1872. G. P.

W. (Southampton.)—Much depends upon the circumstances of the case. A year and a half to two years' purchase, speaking generally, would be a fair charge.

Xenophon can recover fees for surgical attendance and midwifery.

S. D. N.—Certainly not.

INHALATION OF NITROUS OXIDE.

To the Editor of THE LANCET.

SIR,—The following case may perhaps possess sufficient interest to render it worthy of record.

To a little girl of fifteen years of age I was recently administering nitrous oxide. As she was longer than usual in becoming unconscious, my attention was directed to a loud hissing sound, which I had supposed arose from air passing between the face-piece of the inhaler and the face of the patient, but which on closer inspection proved to be air entering and gas escaping from the puncta lachrymalia during inspiration and expiration. With each expiration bubbles of fluid were apparent. She, however, became unconscious in about two minutes, more than twice the time commonly occupied for a child of her age. Upon recovery I examined the puncta, but could observe nothing abnormal in either their size or position. Her eyes were, however, much further apart than is usual.

I am, Sir, yours, &c.,

Old Burlington-street, May, 1872. ALFRED COLEMAN, F.R.C.S.

Dr. White, (Rochester.)—We do not know of any book of the kind. Our correspondent may take the average period of life for a standard, and subtract from it the time by which, in his judgment, that period might be shortened by existing disease, &c.

THE A. B. C. PROCESS AT LEEDS.

To the Editor of THE LANCET.

SIR,—An important error has occurred in your report, about the Leeds sewage, of May the 18th.

The fact is that it is the A. B. C. process which is being carried on so successfully at Leeds, and which the Corporation unanimously resolved to extend to the whole sewage of the town. There is no fault whatever found with the effluent water, which does remain pure and inodorous after standing, and is allowed by the Court of Chancery to pass into the river. It was the offer of the Phosphate Sewage Company to the Corporation which was rejected.

Yours truly,

BURTON SHILLITOE,
Director of the Native Guano Company.

St. Swithin's-lane, London, May 21st, 1872.

*** The error was copied from the *Leeds Mercury*, in which the proceedings of the Council were reported.—ED. L.

BELGRAVE HOSPITAL FOR CHILDREN.

WARDS for the reception of infectious diseases are urgently required in this institution. If a single case of infection is now accidentally introduced, the Committee are obliged to postpone receiving any more patients for some time, to prevent the disease from spreading. The out-patients' department has quite outgrown its accommodation. The extension fund amounts to no more than £55 14s., while the expenditure is rather more than the income. The charity is not a strictly local one; and its benefits are so widely diffused and so substantial that subscriptions should come in liberally to maintain and extend them.

An Undergraduate.—Thorough knowledge of the following works would, we think, with a course of Practical Chemistry, enable any student to pass the Preliminary Scientific Examination:—Wormell's or Newth's Mechanics and Natural Philosophy; Roscoe's Chemistry; Henfrey's or Balfour's Botany; Nicholson's Zoology.

THE CLINICAL TEACHING OF FEVER AND SMALL-POX.

To the Editor of THE LANCET.

SIR,—Your very pertinent remarks on the above subject in THE LANCET of the 18th instant are calculated to call prominent attention to a matter of much importance. There is no doubt that at many of the medical schools of this country students may, and often do, pass through their whole curriculum without having acquired any practical knowledge of the diagnosis, history, or treatment of fever and small-pox. How this is likely to affect the usefulness of these men in after life may be gathered from a consideration of the enormous number of people who annually die in this country of typhus, enteric fever, and small-pox—a number, be it remembered, which probably does not represent more than 15 per cent. of the total number of cases which occur. As you put it, "it certainly cannot be said that any medical man is qualified to practise who has not had the fullest opportunities of studying the history and treatment of diseases occupying the first place in the mortality returns."

If the local government and the managers of the metropolitan asylums can see their way to supply the facilities which are not to be had in our general hospitals, they will not only confer a great boon on the community at large, but will confer a signal and lasting benefit on the hospitals which are under their care. For there is another view of the matter which is also worthy of attention.

The tendency to exclude typhus and small-pox from general hospitals is yearly becoming more marked; coincidently with this there is a growing belief in the propriety of special fever hospitals. Now, one of the great difficulties and anxieties of the managers of such institutions, and also of those general hospitals which have special fever wards, is to be found in the constantly recurring illnesses of their resident medical officers. So much do directors feel this, that they frequently (and very properly) appoint a man who has had typhus in preference to a really better man who has not passed through that ordeal.

If your suggestion for utilising the metropolitan asylums were carried out, these institutions might become schools in which students might receive such a training as would fit them, immediately on entering the profession, for taking the charge of the fever hospitals which are every year becoming more numerous throughout the country.

I would venture to suggest that special wards should be set apart for clinical teaching; that only a few patients (say ten or twelve) should be put in each, and that there should be a cubic space of 3000 feet for each patient. This would reduce to a minimum the risk to the students. Even if there were only half-a-dozen cases in the ward, that number would be ample for clinical teaching; for a man will derive a better knowledge of any disease from six cases carefully and daily watched from beginning to end than he will get from sixty cases observed in a cursory manner. Of course any cases which might happen to possess special interest, and which were not in the clinical wards, might also be used for clinical purposes. At the same time a certain number of clinical clerks might be appointed from among those gentlemen who wished to study fever more specially. To these could be delegated the duty of keeping the records of a certain number of cases in other wards as well as in the clinical ones. It is probable that a large percentage of these clerks and a small percentage of the students generally would contract fever (I refer specially to typhus); but the advantage to themselves, as well as to others, would far more than counterbalance such a drawback. It is in every way better for them to suffer from typhus when students than when engaged in practice; the earlier in life that disease is contracted the greater the chance of recovery. The risk to the students should certainly be diminished as much as possible in the way that I have suggested; but it ought not to form a serious argument against the clinical teaching of fevers. A conscientious man would not hesitate to run any risk which duty demanded of him, any more than a good soldier would hesitate to go into action when called on to do so. Indeed my own opinion is that a little more typhus among students would save many a valuable life when these students are in after years engaged in the active duties of their professional calling.

It will be seen that I specially have typhus in view. The risk of catching enteric fever is so slight that it may with the utmost propriety be received into general hospitals; and we have in vaccination an efficient safeguard against small-pox that no student need suffer from it who chooses to be vaccinated at the commencement of his medical studies.

I am, Sir, your obedient servant,

Dundee, May, 1872. T. J. MACLAGAN, M.D. Edin.

A. P. has engaged to attend all sick persons in the workhouse, and he cannot legally refuse to do this, even should the patients be brought from another union. He has, however, a good claim for extra pay, and the guardians have full power to give it. The Local Government Board cannot offer any objection to such a reasonable proposal.

H. L. R.—We think not.

Mr. F. H. Redwood.—As might be expected, they do not contain exactly the same kind of information. The former is the later publication; the latter contains fuller information on legal matters.

THE CENSUS OF ROME.

ON New Year's morning the entire population of the Eternal City was 244,484 souls, and that of Rome *circondario* 420,875. The percentage of those able to read and write was discouragingly small; while the totally illiterate amounted to 236,146—considerably in excess of half of the population of the *circondario*. The births were 6802, and the deaths 7613, or 1010 more than the births. This excessive mortality is attributed in great measure to the inundation of 1870, which laid a considerable portion of the city under water, and left it damp and unwholesome.

S. D. C.—Dr. Meadows' Manual on the subject.

CHLORAL IN HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—It appears to me that it is only a pretence on Dr. Vann's part in asking me questions; and after I have stated all I know about them, he has the assurance to say I have not done so, and then he replies to them himself according to what his fancy may dictate. With respect to the next paragraph I have to state that it was in everybody's mouth about here that he had reported my case to be one of delirium tremens. He now calls it alcoholism, which is an evasion, as it is merely another term for cases of excessive drinking. He next introduces Dr. Bardsley into this unseemly squabble, for what purpose I cannot define, as the words "bark" or "barking" are not used in my report of Mr. M.'s case. Dr. V. then asserts that "from his own knowledge" my patient had several glasses of whisky on the day of his attack. As a set-off to this, a near neighbour to Mr. M. told me the other day that he was talking to him at his door about half an hour before he became ill, and he saw nothing about him unusual either in his appearance, conversation, or conduct. Again, Dr. V. asks, "Was the dog hydrophobic? If so, this is the only case on record known to have recovered." He is certainly wrong in his statistics on this point; and cases are likewise reported which state that when persons have been bitten, and the dog had never either before or after shown any active symptoms of hydrophobia, still death was the consequence sooner or later after the bite. A long rigmarole comes next between Mr. Broadhurst and himself, in which there is little truth, and I shall not trouble either myself or anyone else with such twaddle. It is strange that Dr. V. has never alluded to the preliminary symptoms as detailed in my report of the case; he shuns or ignores them altogether, and they are of the greatest importance in forming a diagnosis of hydrophobia.

I remain, Sir, yours obediently,

Macclesfield, May 14th, 1872. J. D. SAINTHY.

*** This correspondence must now cease.—ED. L.

THE WEATHER.

THE season is altogether out of joint. While we are shivering in a winter-like spring, West Russia is rejoicing in a spring which counterfeits early summer. Fields and forests, says the *Messager de Vilna*, have a June-like aspect, and the oldest inhabitant cannot recall to mind a spring so precocious and so beautiful.

SUPERANNUATION OF POOR-LAW MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—The session is far advancing, and nothing has yet been done for the unfortunate Poor-law medical officers, though I hoped Mr. Stansfeld's Bill would have provided for them in the way of superannuation. Will Dr. Brady again kindly take their case in hand, and remind the House of Commons how essential it is that the pension he proposed should be paid by the Government and not by the guardians. In Mr. Grubb's case at Warminster it was refused altogether, though he had served twenty-three years. I hope a Bill will be passed this session enabling the Local Government Board to appoint the medical officers and pension them also out of the Consolidated Fund, irrespective of age, after twenty years' service. It really would cost the country nothing, perhaps £4000 or £5000 a year. At present the prospect of a pension is a farce; for very few medical men would like to ask the guardians for one, and if they did they would probably be refused; whereas if a man had a right to one after twenty or twenty-five years' service, it would make his work much pleasanter to him, and would be better for the doctor, the ratepayer, and the pauper.

Let no time be lost; but every Poor-law doctor should strive his best to get a Bill passed at once. I know of no class of men who have so much power in influencing the election of members of Parliament as medical men; and I do not think that the present Government, which appears very shaky, if they have to appeal to the country, will get much support from the doctors, for, as far as they are concerned, liberality is indeed a misnomer. It is not too late now for Mr. Stansfeld to insert a clause in his Bill for granting pensions to the present medical officers, and I hope he will see the necessity of doing so at once.

Farnham, May 9th, 1872. Your obedient servant, W. CASTLE.

A Subscriber's case is a hard one. The German degree would best meet his wants. He would subject himself to no legal action in using the title. The owner of the qualification specified is not entitled to call himself "Dr."

THE PARIS INTERNATIONAL EXHIBITION.

To the Editor of THE LANCET.

SIR,—An International Exhibition will be opened in Paris at the Palais de l'Industrie on 15th July and closed on 15th October next, and is being organised by the National Society of Encouragement to Manufactures and Industry, under patronage of a general Consultive Commission, composed of the Ministers of France, the Ambassadors and Consuls residing in Paris, and some of the leading commercial firms of that city. The articles to be exhibited are divided into 10 groups, and these into 46 classes, two of which are set aside for Chemistry and Pharmacy. Medals of Gold, Silver, Vermeil, and Bronze will be awarded. Intending exhibitors should make their applications before 15th June, and deliveries prior to 1st July next.

I have been appointed agent for this country, and as it is not generally known that there will be an Exhibition in France this year, I trust the particulars herein may be of interest to you.

I am, Sir, yours obediently,

Aldermanbury, London, May 17th, 1872. G. WALLINGTON HOWE.

COCA.

A CORRESPONDENT makes some inquiries regarding the properties of coca. There is considerable difference of opinion as to its effects upon the human subject, and the published accounts are somewhat conflicting; but we think that there is strong evidence in favour of its being a stimulant and narcotic of a peculiar kind, and of some power. An interesting and popular account of coca was published in Johnston's Chemistry of Common Life, and descriptions of its action have been given by various travellers in Peru and South America. The *Erythroxylon coca* is a shrub of about six feet high, with green leaves and white blossoms, the fruit consisting of small scarlet berries. The leaves are gathered and carefully dried. When chewed, they have a slightly aromatic, bitter taste, not unlike that of green tea. Dr. Mantegazza published a prize essay in 1859 on the Properties of Coca, in which he gathered together most of what is known, and detailed some experiments which he made with an infusion of the leaves of the plant. Extraordinary stories are told of the wonderful properties of coca in enabling those who chew it to overcome the feeling of hunger, and to undergo great muscular exertion and fatigue whilst fasting altogether or only using the sparest possible diet. The Incas and Indians, who constantly masticate coca, are said to go through excessive labour with ease, and to require very little food; indeed they believe that it may be, in a great measure, substituted for food. Making every allowance for exaggeration, the accounts that have been given us by some physicians and travellers in Peru and South America would lead to the belief that coca has some remarkable properties in this respect, and we have often wondered that these have never been investigated in this country. It is very possible that in coca may be discovered a valuable aid, in fevers and some nervous and wasting diseases, for sustaining the strength under conditions where ordinary food cannot be taken.

EXTERNAL TREATMENT OF VARIOLA.

To the Editor of THE LANCET.

SIR,—I must still think that to check the variolous eruption is far from groundless; for we frequently find the disease ushered in by violent convulsions, the eruption scarcely appearing. Likewise in scarlatina the same has been observed, the convulsions ceasing with the appearance of the rash. And why not consider the phenomena in these states due to *materies morbi*, as in uræmia and cholæmia, in which exudation is encouraged?

Dr. Carnley asks me what evidence I have of elimination. Spiculæ of metal embedded in cornea, lachrymation, keratitis; and I have no doubt if the eyelid is pasted down, and the escape of the irritant prevented, panophthalmitis would result, with destruction of the one first injured, probably involving the other at a future time. Again, Dr. Carnley says "that a veritable poison germ is received, multiplied, and eliminated, may please for a theory, but is rather coarse pathology." No doubt the ova of a cistoid entozoon may pass into the intestines, where it will grow and flourish, the hooklets are shed and the parasite will be expelled as an irritant; though I by no means wish to say that entozoa are not sometimes purged away.

Dr. Bristowe said in his recent lectures: "We may assume that syphilis is one of those diseases which, according to the doctrine of Virchow, are general diseases, not because every part of the body is infected by their poison, but because the infective material carried by the blood becomes arrested at certain points in which it fructifies, producing the obvious phenomena of constitutional syphilis, and because each one of these secondarily affected points itself acts as a centre from which fresh infective material is thrown into the circulation."

To my mind there appears a great resemblance between the two diseases. In each there is a chemical and dynamic change in the blood, and in both the fœtus is infected *in utero*. As to the actinic theory, it was from witnessing the development of a photographic picture.

I must apologise to you, Sir, for the length of this communication, and feel sure Dr. Carnley will agree with me here. *Tempora mutantur et nos mutamur in illis.*

Your obedient servant,

London, May 21st, 1872. A. H. MORRILL.

THE NATIONAL HOSPITAL.

THE balance-sheet sent to us by *Dr. Leslie* shows the *entire debtor account* for the year 1871 to amount to £913 18s. 4d.; the *annual subscriptions* being, as stated by us, £57 9s.

TUBERCULOSIS AND PYÆMIA.

To the Editor of THE LANCET.

SIR,—In the account given in your number for May 11th of the discussion on pyæmia at the Pathological Society the following words occur: "Dr. Sanderson further stated his belief that there was a close analogy between pyæmia and tuberculosis, but that the former was an acute affair, and the latter one more gradually produced."

Three years ago Waldenburg, of Berlin, published a masterly work entitled "Die Tuberculose, die Lungenschwindsucht und Scrofulose." It is now before me, and on referring to page 455 I find his views expressed in words which admit of the following translation: "Miliary tuberculosis is a resorption disease; it arises from the taking up into the circulation of very finely divided corpuscular elements, and from the deposit of the same as formations of nodules in numerous scattered parts of various organs. Accordingly tuberculosis is a general disease, and also a blood disease in a certain sense, but it is not a specific one. Of all diseases in the nosological system, it stands perhaps the nearest to pyæmia, which is likewise viewed as a non-specific resorption disease. Pyæmia also forms separate deposits in various organs; but they are larger than in tuberculosis, and of a purulent, inflammatory nature. In pyæmia the elements which get into the blood are more extensive, and therefore cause embolism, stasis, large abscesses, and gangrene; in addition, the absorbed particles have a putrid or infectious character, and so excite severe irritation. On the other hand, in tuberculosis the particles are very small and finely distributed, and appear not to be endowed with considerable irritating properties; for this reason they do not occasion well-marked or at least extensive inflammations, but only give rise to the formation of small miliary deposits."

I am, Sir, yours, &c.,

Hertford-street, May-fair, May 15th, 1872. GEO. MOORE, M.D.

Mr. Cooly would be entitled to the fees for certificates required by the magistrate, authorising the removal of insane paupers to the county hospital, but not for the certificates required for Leavesden and Caterham. In the first case he is called in by the magistrate, who employs whom he likes. Having accepted a salary supposed to include extra fees, he is not entitled to charge one for a capital operation.

A CORRESPONDENT wishes to know whether the Cavendish Society is in existence.

PITTING AFTER SMALL-POX.

To the Editor of THE LANCET.

SIR,—Let me recommend as a local application to prevent pitting after small-pox a mixture of one ounce of oxide of zinc to the pint of olive or linseed oil, applied to the face and other exposed parts, and which I have found most useful in a large number of cases. I have been in the habit also of keeping the room darkened, and have met with the best results.

Yours, &c.,

Leeds, May 14th, 1872. E. WEST SYMES, M.D.

J. M. K. (Old Kent-road) must seek the advice of some one in his own neighbourhood.

RICHMOND INFIRMARY.

BY a clerical error last week it was made to appear that Dr. R. A. Warwick had resigned as medical attendant as well as hon. secretary; but he resigned the latter appointment only, and remains one of the medical staff.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Maunder; Dr. Pollock; Dr. Gairdner, Glasgow; Dr. Munro; Mr. Meir; Mr. Holmes; Dr. Woodman; Mr. Grant; Mr. Barnes; Mr. Jefferies; Dr. Matthews; Dr. Shaw; Mr. Pairman, Biggar; Mr. Walford; Mr. Colton; Mr. Biggs, Salisbury; Mr. Cocks, Dundee; Dr. Maberley; Mr. Sainter, Macclesfield; Dr. Webb; Mr. Ford, Gainsborough; Dr. Anningson, Burnley; Mr. Cooly, New Wandsworth; Dr. Campbell, Swindon; Dr. C. A. Gordon, Dover; Dr. Cassells, Vienna; Mr. Crouch, New Cross; Mr. Howe; Mr. Edwards; Mr. Danby; Mr. Langthorne; Mr. Treherne; Mr. Hare; Mr. T. O. Walker, Edgbaston; Dr. Hogg, Woolwich; Dr. Macdonald; Dr. Alexander, Westbury; Dr. Redwood, Rhymney; Mr. Marsh, Holloway; Dr. Farquharson; Dr. Lovell; Mr. Smith, Meean Meer; Dr. Pearse; Mr. Farley, Bristol; Mr. Morton; Mr. Sleman, Tavistock; Mr. Richards, Salisbury; Mr. Lane; Dr. Fitzgerald, Holsworthy; Mr. Brough; Mr. Jenkins; Mr. Simpson, Richmond; Dr. Wilbe; Mr. Latham, Gloucester; Dr. Maclagan, Dundee; Dr. Hooper; Mr. Hodson, Hornsea; Dr. Thorowgood; Mr. Reeve, Sturry; Mr. Hopgood, Sunderland; Dr. Van Roon, Rotterdam; Mr. Weston, Faversham; Mr. Black, Barslem; Mr. Walkinson; Dr. Long, Dalston; Dr. White, Bournemouth; Mr. Turner, Leith; Mr. Hayman, Towcester; Mr. E. Fenn, Fletching; Dr. Ellery, Ridgway; Mr. Horne; Dr. Dickson; Dr. Lindsay, Mickleover; Dr. Johnstone; Mr. Fox; Mr. J. E. Waddell, Tombland; Mr. Garner, Stoke-upon-Trent; Dr. Thursfield, Wellington; Mr. Kennard, Leicester; Mr. Harvey; Mr. Bligh; Mr. Champneys, Frome; Dr. Bodgett, Sandown; Mr. Jones, Balloch; Mr. Hawkes, Sheffield; Mr. Orvey, Douglas; Mr. B. Shillitoe; Mr. Paine, Wexford; Mr. Laxton, Oundle; Mr. N. Peters, Govan; Mr. Jameson, Northfleet; Dr. Williams, Llanrhaidr; Mr. Rees, Rockingham; Mr. Wallerstein, Carlsbad; Mr. Bell; Mr. Blassor, Edgware; Mr. M'Kellar, Nantwich; Mr. Barker, Oakham; Mr. Roberson, Hayling Island; Mr. Goodwin; Mr. Knapton; Mr. Dove, Pinney; Mr. O'Connor, Enniscorthy; Mr. Robinson; Dr. Prosser James; Mr. Warwick, Richmond; Mr. Bostock; Mr. Parnell; Mr. A. H. Morrill; Dr. Mercer, Beverley; Mr. Browne; Mr. Townsend; Mr. Barnet, Uppingham; Mr. Wilson; Dr. Macfarlane, Polmont; H. L. R.; Despised; M.D.; Rusticus; A Governor of the London Hospital; S. D. N.; A. F.; Inquirens; The Editor of the *London Figaro*; An Old Member of the Cavendish Society; Xenophon; B. B.; A Subscriber; The President of the Royal Medical and Chirurgical Society; T. M. A.; S. D. C.; Delta; M.D. Lond.; One who ought to have known better; &c. &c.

Australian Medical Journal, County Express, Tavistock Gazette, Dublin Evening Mail, Church News (Scotland), *Melbourne Argus, Western Times, Leeds Mercury, Isle of Wight Herald, Western Daily Mercury, Waterford Chronicle, Dundee Advertiser, New South Wales Medical Gazette, North-Western Daily Times, Le Bordeaux Médical, Dover Chronicle, Orcadian, Philadelphia Medical Times, Belfast News-Letter, Journal of the Scottish Meteorological Society, Philadelphia Medical Cosmos, Penrith Observer,* and *Parochial Critic* have been received.

TERMS OF SUBSCRIPTION TO THE LANCET.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year	£1	12	6	Six Months	£0 16 3
TO THE COLONIES.				TO INDIA.	
One Year	£1	14	8	One Year	£1 19 0

Post-office Orders in payment should be addressed to JOHN CROFT, THE LANCET Office, 423, Strand, London, and made payable to him at the Post-office, Charing-cross.

TERMS FOR ADVERTISING IN THE LANCET.

For 7 lines and under	£0	4	6	For half a page	£2	12 0
For every additional line	0	0	6	For a page	5	0 0

The average number of words in each line is eleven.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday; those from the country must be accompanied by a remittance.